

The National Locksmith®

\$5.00

CODES
YAMAHA MOTORCYCLE
A7001-A8500, PART 1
— page 91 —

October 1996
Volume 67, No. 10

The Locksmith's Love Affair With Tools

see page 40



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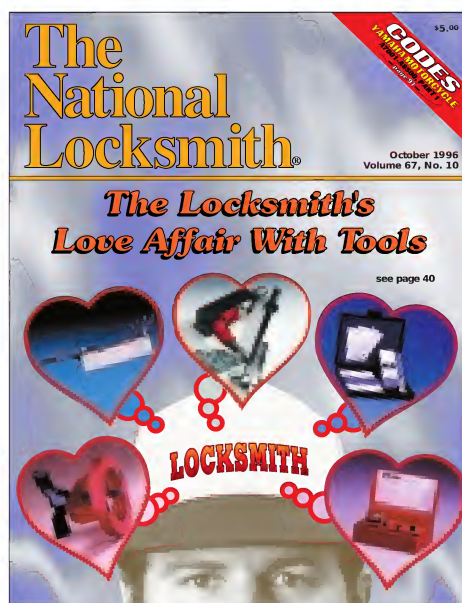
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On The Cover

If you're like most, you love tools, gismos and gadgets. Tools such as: A1 Quick Pull; Keedex Change Key Set; Lockmasters Equalizer; HPC Key Decoder and the All Lock Vats Decoder, are just a few to drool over in this month's issue.



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Commentary

"Locksmith!"...the voice actually barks at me when it answers the phone. I hear the sound of a television droning in the background.

"Is Joe Peters there?" I inquire, returning a call to a locksmith subscriber.

"Who is this?" the voice demands.

When I get Joe on the phone, he's very pleasant when he realizes it is The National Locksmith calling his business. But I can't help but wonder what I would have thought if I were a potential customer calling with a job.

Last month I talked about the opportunities that still abound in this world for a smart, hard working locksmith. I strongly believe that loads of money making opportunities still exist for someone willing to meet the demands of the market.

Salesmanship is not a dirty word. We sell ourselves every day, starting with the way we answer our phone. I know this from experience, as we have received lots of advice here that we need to improve our automated method of answering our own phones. We are in the midst of improving that now, and by the time you read this, I hope to have improved and simplified our own system.

But I still maintain that salesmanship can be important to a locksmith company. Where do you do most of your business? If you are like most locksmiths, yes, you do bench work. The real profits, however, are out on the street.

To expand on my thoughts of last month, I believe you can increase your business by going out and simply asking for more. Use a few spare hours every week to hop in the van, take along a deck of business cards, and go call on the types of commercial accounts you want most. If you don't have spare time, make some. Your own business is worth the investment.

Stop at local shopping centers and drop a card and a handshake on the store managers. Stress that you, too, are a local business person. Visit office complexes in your region and take the trouble to get to know the building manager. If you notice any problems on your way in, point them out nicely, and give an idea of the cost to fix it. You may have to drop by such places a few times before you get results, but if you call on ten new people every month, at least one of them will probably call you by the next month. It may be a quick rekey job now, but next time it might be a large masterkeying system.

Network with others who can help you. Trade a pack of business cards with a local real estate agent, and a local insurance agent, maybe even a garage door installation company. The deal is simple. You hand out their cards and recommend them personally; they do the same for you. By selling for each other, you will all gain more business. Try it and see!



Marc Goldberg
Editor/Publisher

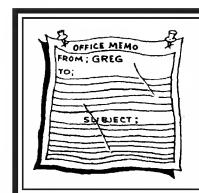
**Salesmanship is
NOT a four
letter word!**

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Write us at: NATLLOCK@aol.com

Marc Goldberg

Mango's Message

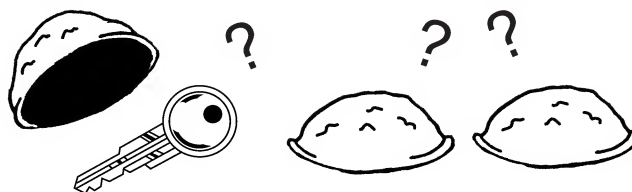


Greg Mango
Managing Editor

Bait and Switch

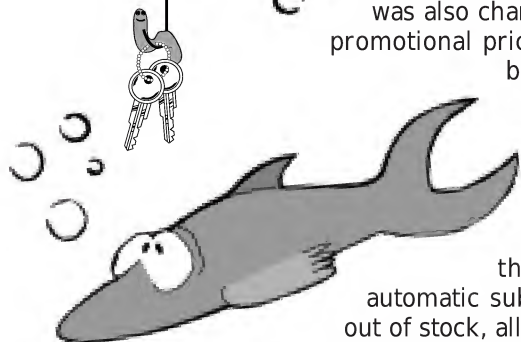
There is a disturbing — and deceitful — sales practice that is becoming more and more common with some locksmith distributors from around the country. Let me preface that statement by saying not all distributors or their sales representatives are guilty of such unscrupulous customs, but I am receiving mounting complaints from locksmiths that have been the victims of such procedures. What am I talking about? Product switching! This is an example of what happens.

John Doe calls his local distributor and orders 200 Silca TOY8 (Toyota) key blanks and a few other items. Upon receiving his order, John Doe discovers that instead of receiving the 200 Silca TOY8 key blanks he had ordered, he instead received 200 STAR TO2 (Toyota) key blanks. Yes, the Star TO2 is a cross reference substitution for the Silca TOY8, but it is not what was ordered. Not a big deal you say? Maybe not. Until you learn that in John Doe's billing statement, he was charged for the Silca TOY8 blanks which just happen to be slightly more expensive than the STAR TO2 blanks! A substitution that initially appeared to be comparable, isn't quite exactly the same now is it?



The fact that a product substitution was made and the recipient of the products was billed the greater price of the two is bad enough. What makes this occurrence even more underhanded, is the fact that the distributor sales representative made no attempt to inform his customer when he ordered, or before delivery, that either of these situations would or could arise. Could this just have been an oversight on the sales representatives part? Yes, it absolutely could have. But, was it an accidental oversight, or an intentional oversight?

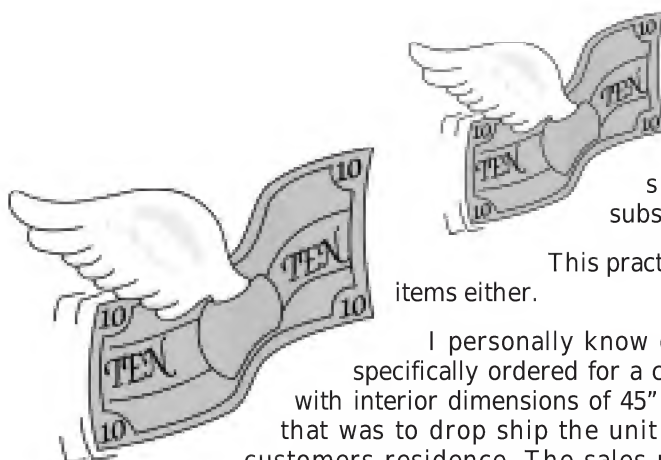
Another incidence of product switching with key blanks is when one particular distributor sent out a product flyer promoting special pricing on original Briggs & Stratton (now Strattec) key blanks. One Ohio locksmith ordered a fair amount of the promoted Briggs & Stratton blanks, only to receive Ilco and JET substitutions. The locksmith was not notified of the substitutions or asked whether substitutions would be acceptable. He was also charged the Briggs & Stratton price. Granted, this was special promotional pricing, but it was also for original Briggs and Stratton key blanks, not Ilco and Jet.



I called the company that had the Briggs & Stratton promotion and inquired about their substitution policy and pricing. As it turns out, this was a common practice for this company and was rather surprised that I would even be questioning their procedure. I was informed that the computer system was pre-programmed to make automatic substitutions on key blanks when the specified product was out of stock, allowing the company to fill the order rather than back order the requested product. When asked if their customers were aware of this automatic

Continued on page 8

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product substituting since it appeared to be standard company procedure, I was met with some resistance. It was of their opinion that most individual's were not concerned that a key blank substitution is made, as long as the substitution is the correct replacement!

This practice is not just happening on small ticket items either.

I personally know of one locksmith store manager who specifically ordered for a customer an "AM SEC FS4524" fire safe with interior dimensions of 45" x 24-1/2" x 18-3/4", from a distributor that was to drop ship the unit the following day at the purchasing customers residence. The sales representative assured the manager ordering the safe that he had that exact unit in stock and could ship it the next day. The deal was made and the safe was delivered.

When the safe arrived at the customers residence, a service technician was dispatched to set-up, service and set a combination on the container. Surprise, Surprise. When the technician arrived, he found that the AM SEC FS4524 fire safe he had expected to service, turned out to be an "Adesco SD109" fire safe with interior dimensions of 45" x 24-1/2" x 18-3/4". At least it was the same size. There was no prior notification by the distributor that a substitution had occurred. Had a service technician not been sent out to set-up this safe, the store manager would have never known about the substitution because she was billed for an AM SEC FS4524!

Are these isolated cases? No! Unfortunately they are not. These are just a few examples I have heard of. I will say however, that switching — or substituting — happens far more often with key blanks, than with any other item. I believe this is because keyblank substitution is a more widely accepted practice. If the key fits the lock, that's all that matters. What difference does it make if it's a Silca, Ilco, Jet, Star, Curtis, Hurd, B&S, All-Lock, ASP or any other manufacturers key blank. Like the old saying goes: If the key fits, use it. (Or was that if the shoe fits?) If you don't believe there is a difference, ask any key blank manufacturer that question and see if it considers the other manufacturers key blanks an equal substitution to their own?

Why are such practices occurring? My guess would be fierce business competition.

Business as a whole is much more complex, cut-throat and unstable now, than at any time in recent years. Escalating operating costs, narrowing profit margins, increasing State, local and Federal taxes, mandatory license and permit expenses as well as mounting restrictions and requirements to stay in business, is all taking a bigger bite from the bottom line. Not to mention increased global competition and dwindling market share. This is leaving everyone with a smaller slice of the pie, causing all to extract as much from its slice as possible. With it, aggression is increased and ethics are decreased. Everyone is fighting to gain, let alone maintain, their share of the marketplace and no-one wants to lose a potential sale.

Am I saying that product substitutions are never acceptable and is always unethical business practices? No, not at all. It's very common to substitute a desired product for another of equal quality.



Does that mean that the STAR TO2 or the adesco SD109 was not of equal quality to its desired product? No, not at all. The customer requesting the product however, should have been notified of the substitution, allowing him or her the opportunity to accept or refuse such a choice. The customer should also be billed for the substituted product, not the product substituted for (or the lesser of the two). Failure to do either of the above however, is always unethical business practices!

TNL

O c t o b e r 1 9 9 6

Letters

The National Locksmith is interested in your view. We do reserve the right to edit for clarity and length.

We Like It All!

We have been a subscriber to your magazine for the past several years and are very satisfied with all the things in it. It is hard to single out one article, writer, etc. to say which one is the best. We seem to think all are #1. Keep up the fine magazine.

*Allen's Lock & Key
Florida*

We Agree With Dee

In response to the article by Dee Bucha in the June issue, I say "AMEN." Licensing is a bad idea for the reasons illustrated and perhaps more. Certainly once the government starts to nose into anything, they only become more and more intrusive and meddlesome. The jack-leg operators out there will weed themselves out, and licensing will not stop the key cutters or hotdogs with Slim-Jims. To put it mildly, we oppose licensing.

*Robin & Cheryl Torrence
North Carolina*

Information Is Tops

I am just writing to let you all know that I have enjoyed the publication, and have picked up a vast amount of information that I have found invaluable. Keep up the good work!

*Stephen Joers
Oregon*

Licensing Is Needed

Yep, I agree. Licensing is on it's way and probably needed. I like the freedom from rules and the freedom from license fees I now enjoy. But, I'll have to admit a certain embarrassment when asked "You do have to be licensed to do this sort of thing don't you?" and I have to reply "No, anybody that can get the tools and some of the knowledge can do it." It doesn't sound or feel very professional.

For instance, if I want some simple book work done, I go to a bookkeeper. If I want some tax work done I go to a CPA. I know, I know, there are a few bookkeepers out there that are better than some CPA's, but they are hard to find. The main difference is training and continuance of their training. I am currently a CPL and proud of it. I went to the necessary classes and took the tests, and to the guys out there who think it is a waste of time, I actually learned some things I didn't know. It is not a waste of time and money.

*Tom Taylor, CPL
Colorado*

How Do You Do It?

I don't know how you do it Marc...but *The National Locksmith* gets better with every issue. Graphics are surpassed only by the content of the articles. Good mix of



technical, biz management and industry news.

*Wynn Kessler
E-Mail*

Living In A Delusional World

Recently I got a phone call in response to my letter printed in this magazine regarding my opposition to locksmith regulation. This fellow was actively proposing the wording for, I suppose, presentation to the politicians in his state. His main reason for pushing for legislation and locksmith regulation in his state was because he personally knew of at least four locksmiths that were doing shoddy work in his area, and not complying with local fire codes, etc. Of the many reasons for sponsoring regulation, I consider this the weakest (they are all weak)!

Do we not see shoddy work in all the professions? Granted it is not widespread, but it is still there. Are there not alarm installers, electricians, plumbers, doctors etc. who have done poor work at one time or another? Do licenses

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Attn: Editor

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prevent them from doing poor work? Locksmith regulation, legislation and licensing puts an added burden (financial) on those who can least afford it. Most of us would love to go to the ALOA convention but don't have the money to do so. Trying to keep up with the expenses related to buying new tools, books, parts etc. is difficult enough. Who needs another one?

You people out there who think you can get rid of, or at least, limit the weak or unprofessional locksmiths in your area are living in a delusional world. Passing rules and regulations will not do it. If they are really as bad as you say, they will kill themselves off in time. Adding an additional expense to the thousands of good locksmiths out there because you fear a few bad apples is an injustice.

*Bob Galcik
Pennsylvania*

Count Me In

I'm a little behind the times. I just found out you had e-mail. Please add me to your e-mail list. I'm a great admirer of your magazine, it helps me get through some tough times. I've been doing this for 8 years and learned most everything on my own. Basic stories that you carry have been a tremendous help. Would like to see an in-depth story on installing electronic strikes and buzzers from start to finish. Thanks.

*Bob Waskiewicz
E-Mail*

Whose Got the Guts

If the locksmith industry is suffering a decline in favor, it is the fault of its own members. Progress, something we love to hate, is passing us by. I hear a lot of grumbling and whining, but I fail to see many people willing to do more, while other related industries continue to sabotage this one.

Some people think that so much harm has been done that we should change the name from locksmith to "Security Professional." Personally, I am proud to be a locksmith, but pride is not the only reason I will vehemently oppose a change in name. The industry has a PR (public relations) problem that must be fixed, and all the energies of the industry should be directed toward the education of the public.

The reason there are no laws or standards is because a bunch of "good ole boys" and their offspring oppose anything that might make them prove they know what they boast about. It's time to put your talent where your mouth is or see your industry die.

The public has a right to information and the public has a right to qualified locksmiths. Without testing, without proof of qualification, without control over who is qualified to participate, the industry can make no promises to the public. If the name "Security Professional" is adopted, the industry will be saddled with the task of educating the public to using the new term. That would be a much bigger task than cleaning up the industry and convincing the public a qualified locksmith is essential for the purchase, installation, and servicing of protective hardware and electronics.

Some efforts have been made to inject the industry with new life, but in every instance the locksmith was not included or was given cursory involvement. It's not hard to figure why. All locksmiths did was block any efforts toward progress, because locksmiths also reject efforts to ally themselves with other locksmiths. Common sense will tell you that without cohesiveness things tend to fall apart. When efforts are made from outside forces to fragment them, they yield.

The industry needs strong leadership and a faithful following to survive. It is time to set the standards, recruit the leadership, and start the action. A giant can be fabricated that will protect this industry from its enemies until it is mature enough to stand, once again, on its own.

Now, the line forms on the right! Whose got the guts?

*R.W. Staples, CML
Washington*

The Top! The Best! First Place!

Congratulations on your recent achievement of surpassing the competition to attain #1 status as the leader (paid circulation) of trade magazines within our industry.

Becoming "Number One" in any field rarely comes without having spent many hours, days, etc...perfecting your skill/talent toward that goal of excellence - The Top! The Best! First Place!

In our industry, information of any kind concerning product, tools, new and old technology, safes, cars, virtually anything we can get our hands on to tell us what is or is not happening that has any affect on locksmithing, helps us climb one step closer toward that goal of excellence. It is great to see that you remain dedicated to provide us with more, so we in turn may do so to our customers. With one less trade magazine on the rack, and a total of 455 more paid subscribers than the nearest competitor, your work is truly cut out for you. Then again, so is ours. Thanks for all the help.

*Dennis K. Helsper
California*

Framon Replies to DBM-1 Article

Just wanted to drop a little note to you. I appreciate the article on our DBM-1 in the July issue. Giles Kalvelage made a few points about the machine that I would like to respond to:

The first was about the machine not running on a 500 Watt Redi-Line generator. This is true; for this reason we offer a 12 Volt motor on the machine for the same price.

The second was the wire brush; as he expected, we do offer a nylon brush which can be substituted at time of purchase. Our findings is that with steel keys, wire works best.

One thing I really appreciate about the articles in your magazines are their objectiveness. I didn't write the article and didn't fill it with doo-dads before it went to press, which I can't say of other magazines in the past.

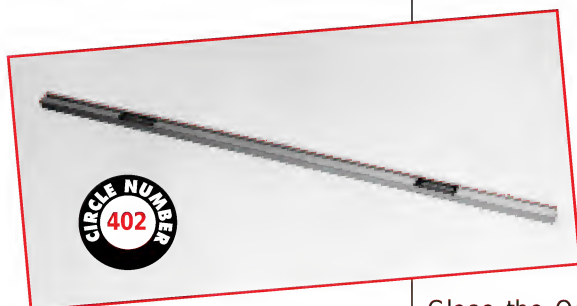
If there is a little extra room in the magazine in the next few months, could you make these points clear for me? I fully understand that you can't append every article that has a little glitch in every month; if you have room and can do it easily, I'd appreciate it. If not, no big deal either!

*Phil Agius
Framon Manufacturing*

TNL

SECURITY CAFÉ

SECURITRON'S NEW ARCHITECTURAL HOUSINGS FOR ELECTRO- MAGNETIC LOCKS



Securiton, the World Leader in Electromagnetic Locking Technology®, introduces field mounted full length architectural housing options for its Magnalock® series of electromagnetic locks. The attractive housing option is designed to use "off the shelf" or previously installed Magnalocks®, and eliminates the typical long lead time deliveries for architectural housings. The new design comes complete with brushed stainless cover, end caps, sub-mounting plates, and fasteners. The full length housing option provides the ultimate in finished appearance with single or dual lock versions available in lengths up to 96" in either horizontal or vertical designs.

WEATHER GUARD ALUMINUM QUICK CLAMP RACKS

The Weather Guard® aluminum Quick Clamp Racks, are available in models to fit both full size and mini vans. They are



designed to make loading and unloading ladders and equipment easy enough for one person to handle. Side rails that run the full length of the van are "hooked" on the front end providing a convenient pivot point. Simply lean the front of the ladder against the front hook and swing the back up onto the rack.

Close the Quick Clamp gas spring assisted clamping mechanism, and you're ready to go.

A new heavy duty model of the Key-Bak self-retracting key reel carries up to five times the weight that standard models handle. This is achieved by the use of a flat spring steel hook, called a Hus-Key, that attaches to the Key-Bak's circular case. When the Key-Bak chain is fully retracted, its load is carried by the Hus-Key, not by the interior spring loaded reel. With the heavy duty Hus-Key model, Key-Bak users carry 25 or more keys. The new model brings the convenience of Key-Bak to many additional trades because the added capability makes Key-Bak ideal for

Security Café

DROP IN FOR
TOOLS, TECHNOLOGY
& EQUIPMENT

NEW HEAVY DUTY KEY-BAK MODEL CARRIES FIVE TIMES THE WEIGHT



carrying a cellular phone, pager, bar code reader and numerous other tools and instruments.

MAXiS Padlocks and Replacement Cylinders

Constructed of solid, quality brass and made to exact standards, MAXiS padlocks and replacement cylinders provide exceptional value at very competitive prices. MAXiS padlocks and replacement cylinders come in popular keyways, including Schlage, Sargent, Yale, Arrow, and more. MAXiS padlocks come in various widths and shackle sizes.



Features include rekeyable cylinder design, double-ball bearing locking, stainless steel springs and hardened shackle. In addition, MAXiS knob cylinders utilize a retaining cap design to provide extra reliability. This feature also allows MAXiS knob cylinders to retrofit into both knob and deadbolt locks, thereby reducing your inventory cost.

American Lock® Introduces Shackleless Solid Steel Model 2010

American Lock Company, a leading manufacturer of high quality padlocks and accessories, introduces the Model 2010, a new shackleless padlock machined from solid bars of steel. The case hardened, solid steel construction of the Model 2010 provides maximum protection against drilling and sawing, while its unique locking bolt design resists crowbar attacks and prying.



The padlock also features an American Lock pick-resistant, 6-pin tumbler for added security. "Due to its high quality construction, this padlock is proven to be resistant to the most violent attempts to defeat it, including attacks from blow

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S E C U R I T Y C A F É

torches, hammers, and dent pullers."

NEW EVERYTHING-IN-ONE OPTIVISOR



CIRCLE NUMBER
407

Whether you are impressing keys, inspecting lock parts or working on time lock movements, you'll appreciate the sharp, clear magnification and illuminating side lights. In this new model, the side lights and lens options are built-in and easily accessible. Four levels of magnification, from 1.8 to 4.8, are built-in. The Optivisor's light-weight design and adjustable, velcro head band allows you to work for hours without discomfort.

SECO-LARM'S COMBO ALARM/PAGER SYSTEM FEATURES VIBRATING RECEIVER

SECO-LARM is now shipping its latest commercial/vehicle alarm pager, the SECOPAGE 35E7 with vibrating receiver. The SECOPAGE 35E7 easily connects to another car or burglar alarm, or acts as a complete alarm with a built-in paging function. It features seven trigger inputs -two delayed wired zones for the doors (one each positive and negative triggered); four instant wired zones for hood,



CIRCLE NUMBER
408

trunk, shock sensor, or other doors (one positive and three negative triggered); plus a manual paging button.

HARLOC'S NEW LEVER SHOWCASES CONTEMPORARY LOOK WITH A QUALITY FEEL



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Having assessed the needs of locksmiths in the lever category, Harloc Inc. is

showcasing its latest addition to the Terra series, the Prairie lever, which offers outstanding strength, durability, and a contemporary design. In an effort to incorporate features important to locksmiths, the Prairie lever is built on a newly designed chassis and has concealed holding screws and solid brass cylinder assemblies. Designed with aesthetically pleasing free-flowing curves and smooth edges, the Prairie lever is also a delight to the eyes and provides ease of use for people of all ages.

AP5000 PRECISION DRILL SHARPENER

The New Darex AP5000 Automatic Precision Drill Sharpener is the latest in technologically advanced drill sharpeners. This micro-controller based drill sharpener with LCD display is designed to increase production and reduce



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operator fatigue. The AP5000 automatically aligns the drill and turns the chuck. Capacity 1/16 to 1". Designed for simplicity of use, the Darex AP5000 is perfect for use by people of all skills who demand consistent accuracy.

SAF T LOK, INC. INTRODUCED PERSONALIZED "QUICK-CLICK" GUN LOCK

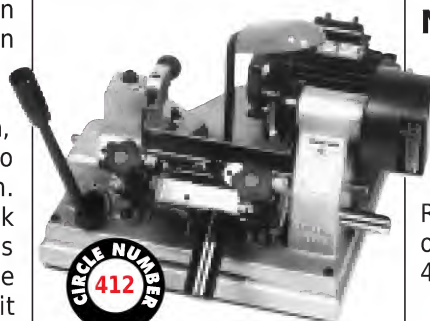
SAF T LOK, Inc., a worldwide leader in firearms safety, introduced its touch-sensitive personalized locking system for guns. The Saf T

Lok patented "quick click" combination prevents accidental discharge and can be unlocked by the owner in less than five seconds, even in complete darkness. Installed in the grip of a gun, Saf T Lok requires no modifications to the firearm. When engaged, Saf T Lok blocks the internal workings or the external safety of the firearm, rendering it inoperable until the proper, proper combination is pressed.



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Tarus "B" Machine Enhances Features



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The Tarus "B" semi automatic key machine from Secure Industries, has undergone design changes. The machine features all metal solid construction, an adjustable key guide, four-sided serrated vices to cut single and double sided keys and a de-burring brush light. The machine cuts 98 percent of all pin and wafer type key blanks with a high grade steel cutter, guaranteed by Secure to make clean and precise cuts. Locksmiths who purchase the Tarus "B"

machine will also receive 500 free econo key blanks.

NEW TAMPER PROOF KEY RINGS

Morse Watchman Inc., announces the introduction of its new Tamper Proof Key Rings. These rings are offered in 2-1/2", 3-1/2", and 4-1/2" diameter rings.

No tools are required to close key ring assembly.



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The Tamper Proof Key Rings replace welded rings, prevents removal of keys, are not resealable if opened and are serialized to identify rings and prevent substitutions. **TRL**

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GENERAL SECURITY
Test Article #136



by Sal Dulcamaro, CML

FEDERAL'S

QUICK CHANGE

SHACKLE PADLOCKS



1. A small sampling of the padlocks made by Federal.



2. On the right side of each padlock body is a hex head screw.

When a locksmith shop is about to add a new line of padlocks to inventory, many different factors are taken into account before a decision is made. Quality and price are always important factors, but there are other considerations. The technician in each of us also looks at things like versatility and ease of service.

Padlocks come in many shapes and sizes, and to accommodate our customers' needs, they are often available with different shackle lengths and materials. Stocking padlocks with a large variety of shackle lengths can put a strain on the cost factor. Padlocks with replaceable shackles can keep some of those costs down.

Replaceable Shackle Padlocks

When stocking padlocks with replaceable shackles, you can reduce inventory by stocking padlocks with the base body and standard shackle. Separately stocked shackles of different lengths can provide your customers with every possible padlock variation with a much smaller dollar investment on your part. It will also reduce the amount of shelf space that will be taken. Then all you need to do is switch shackles.

Why do you look concerned? All I said was "switch shackles." You must be having flashbacks to some earlier experiences with replaceable shackle padlocks. I admit that in years past (and with some currently manufactured replaceable shackle padlocks) it has been a minor nightmare trying to switch shackles. You often felt that you needed three or four hands to get all the different parts

Continued from page 18



3. The series 900 padlock with a longer replacement shackle.



4. An Allen wrench has been inserted into the screw head to remove it.



5. The shackle retaining pin fully removed.

in place, not to mention the delicate touch required to prevent everything from shooting apart in all directions.

Many padlock manufacturers have dramatically simplified the procedure of replacing one shackle for another. Often the switch can be done in five minutes or less. Among those companies, Federal Lock Company is one of the easiest. It's a virtual no brainer, where the switch is complete in about a minute or two.

Quick Change Shackles

Photograph 1, shows a small sampling of the padlocks made by Federal. At the left is a series 900 "Classic Steel" round body padlock. It has a 2" wide body with a 7/16" diameter shackle. In the middle is a solid steel series 100 padlock with a 1-3/4" wide body. Off to the right is a (blue colored) aluminum body 90A padlock with a 1" wide body. All three padlocks have standard shackles with a one inch clearance. The shackles are hardened steel and are secured by stainless steel locking balls.

A back side view of each of those padlocks is shown in Photograph 2. To the right side of the padlock body (on each) is a hex head screw. Leaning on the middle padlock is a 3/32" (hex key) Allen wrench that is the proper size for removing or installing the combination hex head screw/ shackle retaining pin.

Switching Shackles

Photograph 3, shows the series 900 padlock with a longer (2" clearance) replacement shackle to its right. This is not the older style hardened steel shackle, but the new hardened anti-cut molybdenum steel shackle. Three different shackle lengths are available for the series 900 padlocks: 1", 2" and 3".

In Photograph 4, the Allen wrench has been inserted into the screw head to remove it. Photograph 5, shows the shackle retaining pin fully removed from the lock body. Once the shackle retaining pin is removed, the shackle replacement procedure is extremely quick.

The operating key (rotated clockwise) unlocks the shackle in Photograph 6. There is a spring that will tend to rotate the plug back counterclockwise, so you must maintain full clockwise rotation of the plug until you pull the shackle fully out of the padlock body.

Continued from page 20



6. Padlock in the unlocked position.



7. The new shackle being attached.



8. All that's left is to replace the shackle retaining pin.

Photograph 7, shows the new shackle being attached. You must also maintain clockwise rotation of the plug, during the shackle reinsertion process. In less than a minute, the shackles have been switched. All that's left is to replace the shackle retaining pin, shown in Photograph 8, and tighten the screw with the 3/32" Allen wrench. That's it.

Federal's quick change shackles are undoubtedly very quick. The quick change shackle is available on all of Federal's solid body padlocks, which include some padlocks that use commercial style cylinders which can be keyed to match door locks. The

quick change shackles are not found on Federal's laminated or inexpensive brass padlocks.

Rekeyable Padlocks

Most of the Federal padlocks are rekeyable, including the series 900 padlock which was previously shown. Replacing or rekeying the cylinders for Federal padlocks is a fairly simple procedure. Photograph 9, shows the bottom face of the series 900 padlock. The keyway can be viewed through the opening in the security cover plate. The security cover plate holds the lock cylinder securely in the lock body. Most of the keyed cylinders in Federal padlocks come standard as 6 pin tumbler.

After the padlock is unlocked and the shackle is moved out of the way, you can gain access to the security screw. If you look carefully at Photograph 10, you will see the head of the security screw down in the hole where the toe end of the shackle was previously withdrawn. It requires a Phillips head screwdriver to remove it.

Photograph 11, shows a side view of the series 900 padlock with the security screw undone. The security screw is hanging part way out at the right side of the padlock. The security cover plate and the security nut are coming out on the opposite side at the left.

With the security cover plate off in Photograph 12, you get a full front view of the keyed cylinder inside the padlock body. When the cylinder is removed as in Photograph 13, the empty cavity remains for that cylinder (or another) to be replaced and the padlock reassembled.

If you had another cylinder ready to go, the complete process of replacing the cylinder would take about two or three minutes. That's not a whole lot longer than it takes to switch shackles. If you intended to rekey that particular cylinder, it would



9. The bottom face of the series 900 padlock.



10. The head of the security screw is in the hole where the toe end of the shackle is.



11. A side view of the series 900 padlock with the security screw undone.



12. With the security cover plate off, you get a full front view of the keyed cylinder.

take a bit more time to complete. This padlock and many other Federal padlocks that don't accept commercial keyway type cylinders will require a special pin kit with smaller diameter pins than are found in most commercial cylinders. If you didn't have the proper pin kit but needed to rekey the cylinder, you could probably rearrange the existing tumblers and cut a new key.

Federal Lock Company makes a wide variety of different padlocks for many purposes and applications. Currently, Federal Lock is the only company to offer the quick-change



13. The empty cavity remains for a cylinder to be replaced.

shackle innovation on their full line of solid bodied padlocks. With this addition, Federal Lock Company adds to the standard features of stainless steel first pins, standard 6-pin cylinders with mushroom serrated brass pins, and nickel-plated, solid steel bodies while maintaining a very competitive price.

For more information on the quick change shackles or other Federal products, contact: Federal Lock Company, 14247 E. Don Julian Road, City of Industry, CA 91746. Phone: 818/961-1887. FAX: 818/961-9017. Order Desk: 800/682-9851. **TNL**



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AUTOMOTIVE SECURITY
Test Article #137



by Michael Hyde

Servicing the 1996 Dodge Stratus, part 2

This month we will continue our series from last month on the Stratus.

DOOR LOCK:

1. The door lock is integrated into the handle as seen in the photograph.



2. To service the door lock it will be necessary to remove the inside door panel to gain access to the lock.



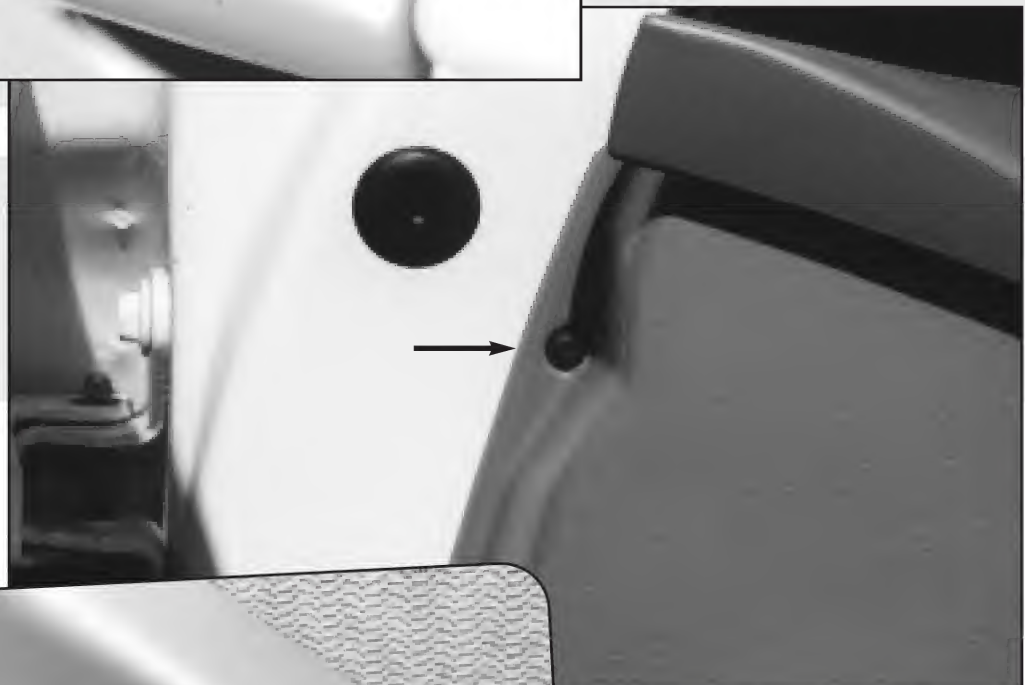
3. On the inside handle release is a trim piece that needs to be removed. It has a little access door that pops open so you can remove the phillips-head screw.

Continued from page 24



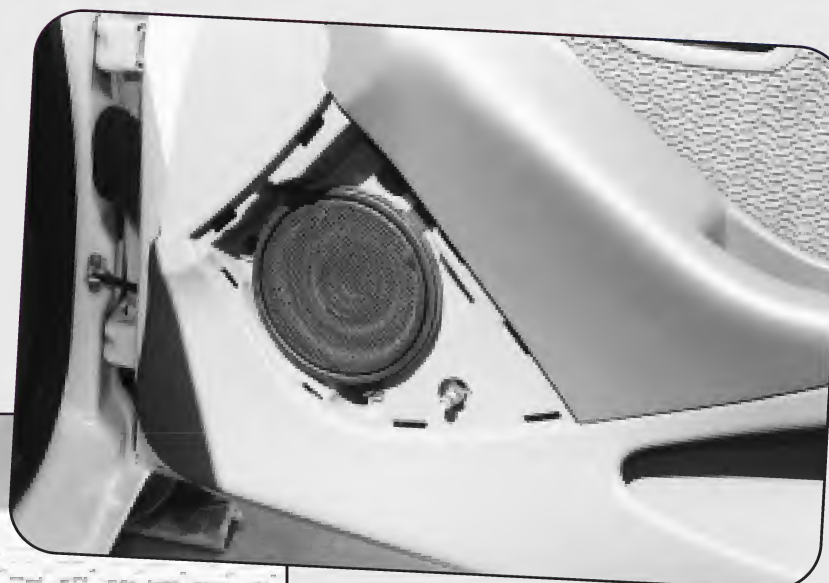
4. The door pull cavity has a Phillips-head screw in it also. The screw is hidden behind a little cover.

5. There is a screw on the upper forward edge of the door panel that must also be removed.



6. Remove the window crank by sliding out the clip that sits behind it. It is almost identical to the type used on most G.M.'s. Next insert a small screwdriver on the corner of the speaker cover and unsnap it.

7. Remove the three
phillips-head screws
from the recess of the
speaker cavity.



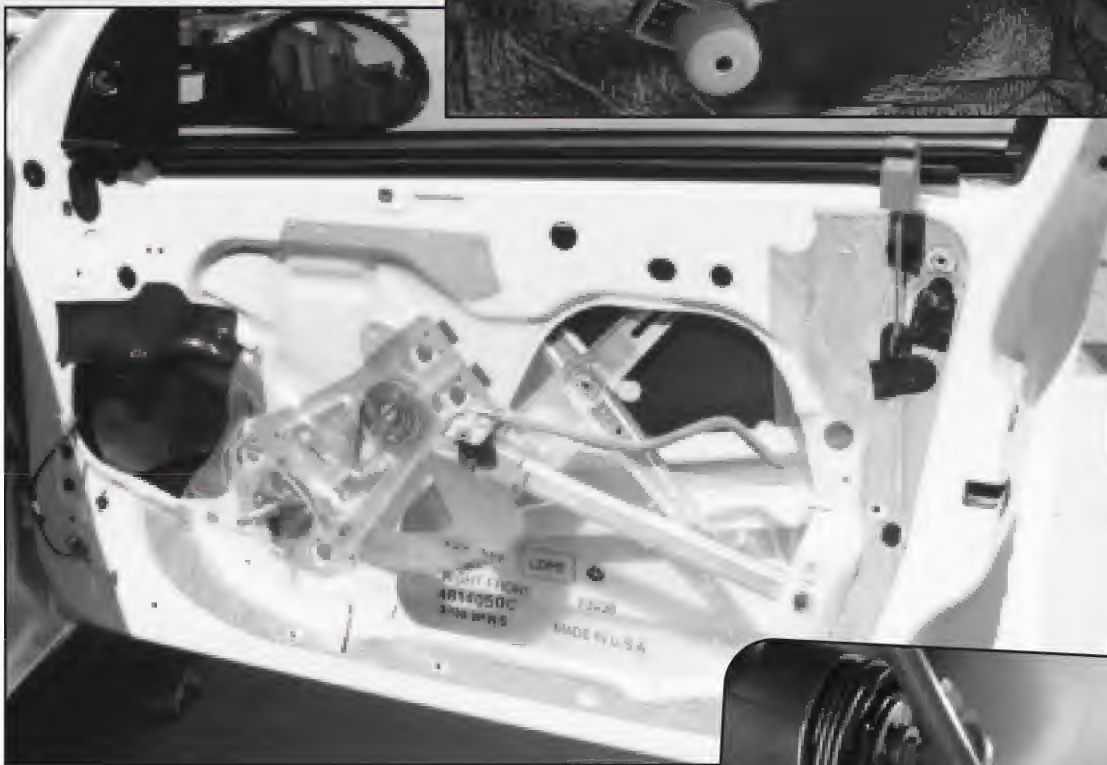
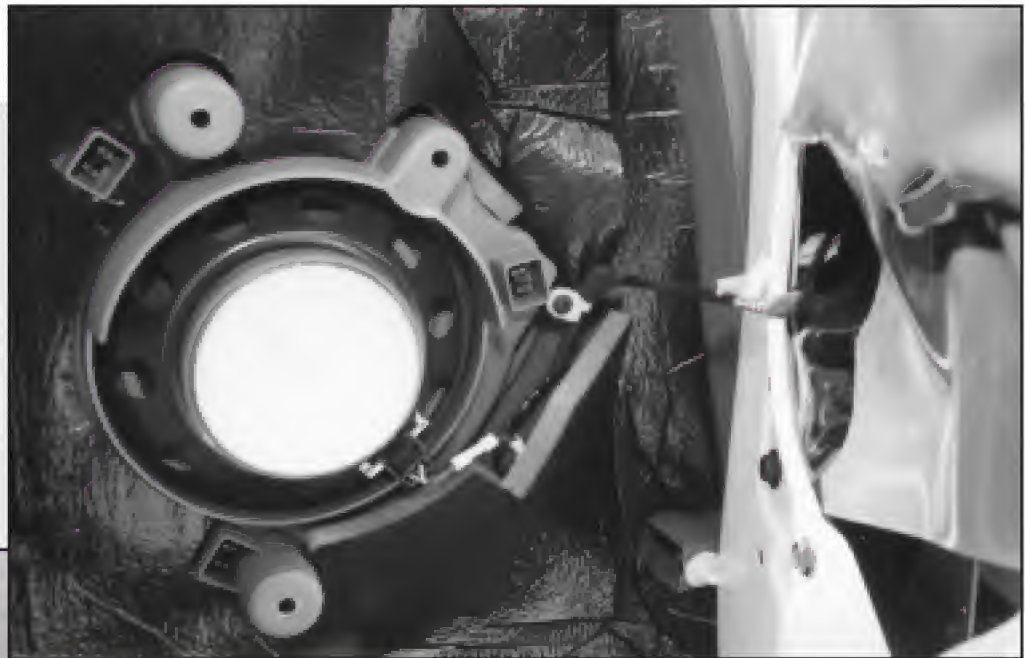
8. Now you can remove the door
panel by gently pulling outward
on the lower portion of the panel.
The panel is secured by the use of
plastic push-in style clips. Once
you have the panel ajar from the
door, you will need to remove the
inside release door linkage rod.



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9. Once the linkage rods are out of the way, it will be necessary to remove the Torx20 screw that holds the speaker cable to the panel.



10. A view of the door with the panel removed. To gain easy access to the door lock you should remove the right side window track. It is secured to the door by one 10mm bolt. Remove the bolt and the window track will slide down and then can be removed from the door.

11. Disconnect the linkage rod from the outside door handle at the latch assembly. Disconnect the door lock linkage at the cylinder.

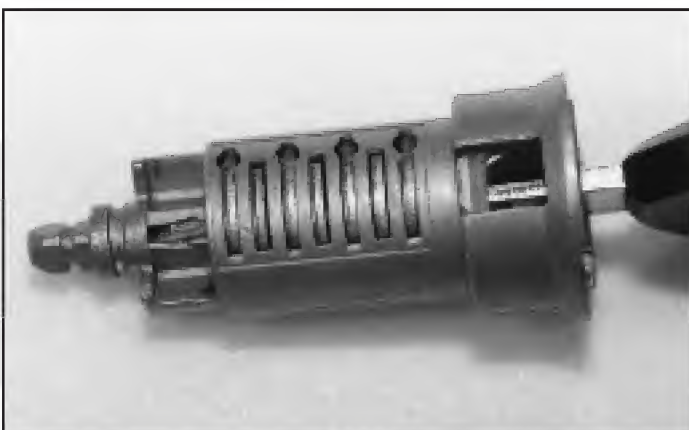




12. Remove the two 10mm bolts that hold the outside handle on and lift the handle out of the way. Remove the horseshoe clip that holds the lock cylinder onto the door.



14. To disassemble the cylinder you will have to remove the face cap and the tailpiece. The Strattec replacement cap part number is #321847.

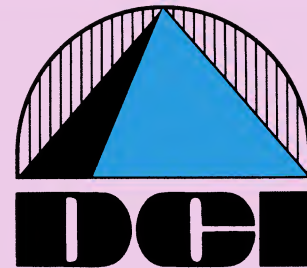


15. The door lock cylinder plug contains all seven tumblers. Replacement tumblers are numbered from #322361 through 322364.

We will conclude our series on the Dodge Stratus next month, covering the trunk lock, rear seat lock and the glove box lock. See you then. **TRL**



13. The lock cylinder is pictured.



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ELECTRONIC SECURITY Test Article #138



by Steve G ebbia



The Next Generation

Trilogi's newest introduction supersedes its original alarm lock design.

Alarm Lock recently introduced their new Trilogi lockset. At first glance, the "T2" looks like its older brother, but the resemblance is only skin deep (see photograph 1). Everything about this lock is new from the ground up. Even the apparent similarities disappear upon closer scrutiny.

The DL2700 series lock has the same footprint on the door as the original DL2500 series Trilogi lock. But that's where the similarities end. The most striking difference is the new keypad (see photograph 2). Instead of six buttons like the original, this lock has a metal, twelve key, telephone-style keypad. This

reconfiguration of the keypad to a standard format is sure to be welcomed by end users - particularly those who use telephones or calculators often. More importantly, all ten digits are now available for use. How many times have you told a customer that you can't set the lock to "6-0-3" because there is no number 6 or 0 on the keypad? Never again. Now you can use any 3, 4, or 5 digit code your customer chooses.

Next to the keypad are 2 LED's. Now your customer has a visual signal of the lock's status - red for locked, green for unlocked.

The T2 is available with a knob or a lever and has the same key override options as the original Trilogi:

A solid brass 6 pin tumbler cylinder (keyed 5 pin), Schlage "C" keyway or it will accept a Best style interchangeable core cylinder (6 or 7 pin), tailpiece included, core not included.

One of the nicest features of this new lock is the clutch action of the exterior lever. When locked, the lever rotates freely approximately 60 degrees without retracting the latch. Entering the proper code, using the key bypass, or the remote release will allow the lever to retract the latch.



2. The most striking difference is the new keypad. Instead of six buttons like the original, this lock has a metal, twelve key, telephone-style pad.

The T2 Trilogi is also non-handed. To reverse the handing, simply remove the outside lever or knob (rotate the key 45 degrees and depress retainer using an icepick or similar poke tool), rotate the lock body 180 degrees, and re-install the lever or knob. That's all there is to it.



1. Alarm Lock recently introduced their new Trilogi T2 lockset. At first glance, the "T2" looks like its older brother, but the resemblance's are only skin deep.



3. A close-up of the lock chassis. The white spacers are used to adjust for doors from 1 5/8" to 1 7/8" thick.

Photograph 3 is a closeup of the lock chassis. The white spacers are used to adjust for doors from 1- 5/8" to 1- 7/8" thick. It comes from the factory set for use on 1-3/4" thick doors - with 3 plastic spacers installed.

To Adjust For Door Thickness:

1. Remove outside lever or knob
2. Remove chassis assembly from outside housing.
3. Unscrew backing plate
4. For 1-5/8" door, remove one spacer (use two spacers)
5. For 1-7/8" door, add one spacer (use four spacers)
6. Screw backing plate to spacers
7. Reassemble chassis into housing
8. Install lever or knob

The T2 Trilogy is UL listed Grade 1.

The 2-3/4" deadlatch is UL listed - fire rated, 3 hours. It has a 1/2" throw, is solid brass, and has an adjustable face for flat or beveled doors.

The remote release option has also been modified. Instead of using a plug-in connector, there is now a terminal strip on the circuit board located in the inside housing (see photograph 4). Simply connect your 2 leads from the release button to the terminal strip - no external power required. While there are 7 terminals, only two will be used. The others are reserved for future options.



4. Instead of using a plug-in connector there is now a terminal strip on the circuit board located in the inside housing for remote release.

One important point to keep in mind: this lock is not sealed against moisture (see photograph 5). It is intended for interior applications only.

The Installation

The inside housing is 8-1/4" high, 6-1/2" from the center of the latch. When replacing an existing knob or leverset, be sure to allow enough room above the latch centerline to accommodate the entire lockset.

Using the installation template, mark and drill all holes. If this is a new

installation, drill the (2) 3/8" holes before drilling the 2-1/8" crossbore. If the crossbore is drilled first, it can be difficult to drill these holes due to their close proximity to the larger hole (see photograph 6). Be sure to radius the edge of the 3/4" hole to prevent chafing of the ribbon cable.

If you have not adjusted the lock for the correct door thickness, do so now. Also, check the lock for proper handing and correct if necessary.

Carefully thread the lockset, ribbon cable, and motor wire into the door. The ribbon cable should feed through



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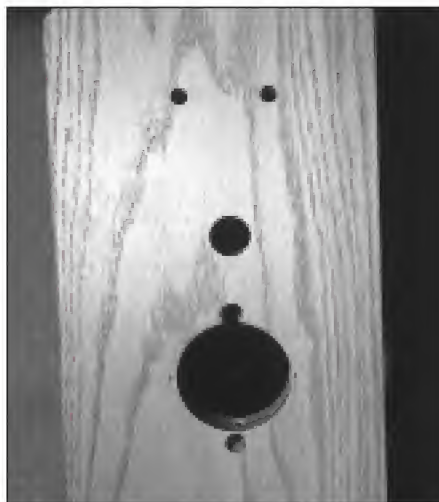
5. This lock is not sealed against moisture. It is intended for interior applications only.

the 3/4" hole and the motor wire will feed through the 2-1/8" hole. Be sure not to pinch the wires between the lock and the door and check to make sure the latch is properly engaged.

Alarm Lock has made several changes to help the installer. One of these is the new mounting system. The mounting bolts for the original Trilogy were located inside the battery compartment. Sure, there was a spanner collar, but this only held the outside housing - not the inside housing. The new system uses two mounting plates - one round and one rectangular. This means less juggling for you - and you can now remove the inside assembly without disturbing the outside housing.

Thread the ribbon cable through the large (rectangular) mounting plate and install the two machine screws (see photograph 7). Install the small wood screw at the bottom of the plate. Be sure not to pinch the cable between the plate and the door.

Install the round mounting plate - carefully threading the motor wire



6. If crossbore is drilled first, it can be difficult to drill these holes due to their close proximity to the larger hole.

through one of the notches. Secure the wire with tape (see photograph 8). This will prevent the wire from being crushed by the inside housing.

The outside housing should now be securely attached to the door.

Now you are ready to connect your wires to the inside housing (see photograph 9). Note the position of the ribbon cable connector. This is another welcome change. The connector on the circuit board now faces upward - allowing the ribbon cable to lay flat against the door. The earlier design had the connector sticking straight out. This forced the cable to make a 90 degree bend right at the connector - making it easier to accidentally damage the cable.

Carefully guide the inside housing over the spindle making sure that all wires are inside of the housing before tightening the 2 through bolts (see photograph 10). You may need to depress the spindle catch (lever retainer) in order to allow the housing to seat fully against the door. Install the (2) 6-32x3/8" machine screws on the sides of the housing (near the top). Install the inside lever or knob.

The new T2 takes (5) AA size alkaline batteries (see photograph 11). Be sure to observe the proper polarity when installing them. Attach the battery compartment cover and the installation is done.

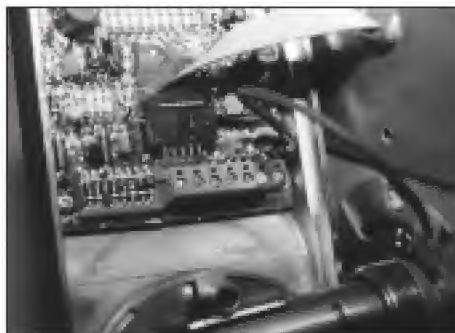
If you plan to use a remote release, you must prepare for this in advance. You will need to provide a way to get



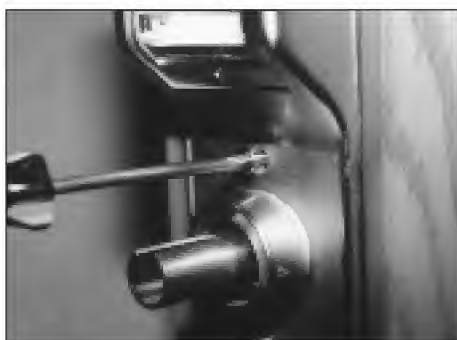
7. To connect, thread the ribbon cable through the large rectangular mounting plate and install the two machine screws.



8. Secure the wire with tape. This will prevent the wire from being crushed by the inside housing.



9. The connector on the circuit board now faces upward, allowing the ribbon cable to lay flat against the door.



10. Guide the inside housing over the spindle making sure that all wires are inside of the housing before tightening the two through bolts.

the wire through the door and into the 2-1/8" hole. This entails drilling a hole from the hinge side of the door to intersect with the crossbore.

Programming



11. The new T2 takes (5) AA size alkaline batteries.

Now that the lock is on the door, you can think about programming the T2 Trilogy. The programming options of the T2 are the same as the original Trilogy. The only variation is that you now have a 12 digit keypad so all ten digits (0-9) are available for use in your codes.

As you enter each code, you will receive visual and audible feedback.

Audible and Visual Indications

One beep: whenever a key is pressed, or Red LED: whenever a key is pressed, or after a valid code is entered, or when a wrong code is entered, or at end of unlock time (just before the unit relocks) if batteries are weak. Two beeps: at end of anti-tamper timeout. Five beeps: after entry of an invalid code. Six beeps: acceptance of a valid code. A 5 second tone (when a key is pressed): indicates low battery.

Codes

The Trilogy allows (1) Master Code, (1) Management Code, (15) User Codes, and (1) Service Code. The Master Code controls all functions of the lock. These include: entry, programming of any codes, and control of the following options: unlock time, passage mode, disable or enable codes individually or by group. The Master code must be changed before any other codes or any options can be set. This code can be from 3 to 5 digits in length. All codes must be the same length as the Master code.

The Management Code controls most operations of the lock. It allows: entry, programming of any User codes, and control of the following options: unlock time, disable or enable User codes individually or by group. It cannot change, program or delete the Management code or the Master code. It also cannot control the



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passage function.

User codes will allow entry but cannot control any other functions of the lock. These codes are organized into three groups or banks of codes. Each bank contains five codes.

The Service Code is actually the 15th User code (Bank 3, User 5). This code will allow one-time access and then will automatically delete itself.

Programming the Codes

Before you can program any User codes, Management code, or set any options, you must change the Master code. All Trilogy locks default to the factory code (1-2-3-4-5) when the batteries are disconnected. Changing the Master code will erase all codes.

To change any code, first enter program mode by entering either the Master or Management code. Next enter the program address. This identifies the code that you wish to change. Then enter the new code. All codes must be entered while unit is unlocked. Make a list of all the codes to be programmed and work off this list while programming the new codes. The chart to the right shows program addresses of various codes.

Master Code

To set a new Master code, enter: existing code, AL -1- AL, new code, AL, new code. Only the Master code needs to be entered twice. This is to

| Code | Program Address |
|-----------------|-------------------------------------|
| Master code | AL - 1 - AL |
| Management code | AL - 2 - AL |
| Service code | AL - 3 - AL (replaces User 15 code) |
| User 1 | AL - 1 - 1 - AL (Bank 1, User 1) |
| User 2 | AL - 1 - 2 - AL (Bank 1, User 2) |
| User 3 | AL - 1 - 3 - AL (Bank 1, User 3) |
| User 4 | AL - 1 - 4 - AL (Bank 1, User 4) |
| User 5 | AL - 1 - 5 - AL (Bank 1, User 5) |
| User 6 | AL - 2 - 1 - AL (Bank 2, User 1) |
| User 7 | AL - 2 - 2 - AL (Bank 2, User 2) |
| User 8 | AL - 2 - 3 - AL (Bank 2, User 3) |
| User 9 | AL - 2 - 4 - AL (Bank 2, User 4) |
| User 10 | AL - 2 - 5 - AL (Bank 2, User 5) |
| User 11 | AL - 3 - 1 - AL (Bank 3, User 1) |
| User 12 | AL - 3 - 2 - AL (Bank 3, User 2) |
| User 13 | AL - 3 - 3 - AL (Bank 3, User 3) |
| User 14 | AL - 3 - 4 - AL (Bank 3, User 4) |
| User 15 | AL - 3 - 5 - AL (Bank 3, User 5) |

ensure that it was properly entered. Example: to change Master code from factory code to "5-1-7-6", enter: 1-2-3-4-5, AL-1-AL, 5-1-7-6, AL, 5-1-7-6.

Management Code

To set a new Management code, enter: Master code, AL-2-AL, new code. Changing the Management code does not affect any other code. Example: to set a new Management code of "3-1-7-6", enter: 5-1-7-6, AL-2-AL, 3-1-7-6.

User Codes

To set the User Codes, enter: Master or Management code, User code location, new code. Example: to set User code 13 to "5-1-3-7", enter: 5-1-7-6, AL-3-3-AL, 5-1-3-7.

If several User codes are to be programmed, it is not necessary to re-enter the Master or Management code as long as the unit has not relocked. Simply enter the next program location and continue entering codes. Example: to set User codes 1, 2, and 3 to "1-1-3-3", "1-1-3-4", and "1-2-1-3" respectively, enter: 5-1-7-6, AL-1-1-AL, 1-1-3-3, AL-1-2-AL, 1-1-3-4, AL-1-3-AL, 1-2-1-3.

Service Code

To set the Service code, enter the Master or Management code, AL-3-AL, new code. If you use a Service code, you cannot use User code number 15 (location 3-5). This code replaces User code 15. The Service code will work only once and then it will erase itself. Example: to set a Service code to "6-3-4-1", enter: 5-1-7-6, AL-3-AL, 6-3-4-1.

Conclusion

The T2Trilogy incorporates some welcome changes to the original Trilogy lock. These changes only help to increase the security, useability, and ease of installation of the lock. It is evident that quite a bit of thought went into designing this new lock.

Alarm Lock has once again designed a low cost alternative to mechanical access control locks. The one disadvantage is the lack of weather protection. Perhaps they're working on that right now.

For more information on the T2 Trilogy lock, (series DL2700), contact your local distributor or Alarm Lock Systems, Inc., 345 Bayview Ave., Amityville, Ny 11701, (800) ALA-LOCK (252-5625).



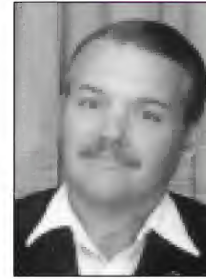
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BEGINNER'S CORNER

Servicing the Master Lock Knobset & Leverset



by
Jim Langston

To service the Master Lock knobset, you must first remove the cylinder assembly from the knobset. To do so, hold the outside knob assembly in one hand with the rose resting in the middle of your palm. The notches of the turnbar is then placed between the thumb and index finger. (see Photograph 1).

NOTE: The alignment marks ("Master" logo/ arrow) on the back side of the rose must be in the upward 12 o'clock position.

Holding the assembly firmly in your hand, pull out on the turnbar with your thumb and index finger, retracting it away from the knob. Insert the operating key in the outside knob assembly and turn counter-clockwise 180 degrees (key is now in the upward

12 o'clock position) while simultaneously pulling out on the turnbar. The cylinder assembly can now be removed from the knob (see Photograph 2). Release the turnbar and set the outside knob assembly aside to reassemble later. You are now ready to rekey the cylinder.

The cylinder assembly consists of the cylinder case assembly and the key plug assembly. To remove the plug, take a pair of retaining ring pliers and remove the retaining ring at the end of the assembly (see Photograph 3).

CAUTION: Do not over stretch retaining ring while removing it. If bent out of shape, the ring will not snap back into position when reinstalled.

Next, remove the stop washer and set it aside (see Photograph 4).

Now remove the cylinder stop (see Photograph 5).

NOTE: Cylinders produced prior to April 1994 require flat design cylinder stops. Two stops are required per cylinder (see Illustration A).

Finally, remove the C-shaped retaining ring with tweezers or small screwdriver (see Photograph 6).

To remove the plug from the cylinder assembly, you must turn the plug so the bottom pins are not aligned with the top pins. Turn the knob plug to the 2 or 3-o'clock position. Using your following tool, push the key plug out of the cylinder assembly. You are



1. Pull out on the turnbar with your thumb and index finger, retracting it away from the knob.



3. Remove the retaining ring at the end of the assembly.



2. The cylinder assembly can now be removed from the knob.



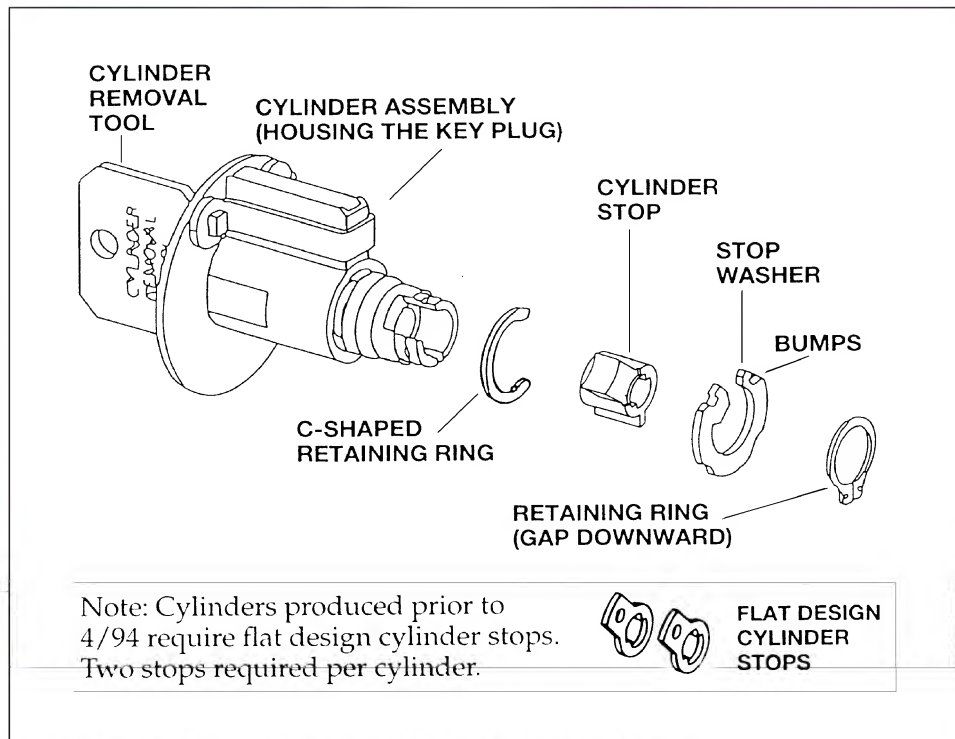
4. Remove the stop washer and set it aside.



5. Now remove the cylinder stop.

now ready to rekey the key plug (see Photograph 7).

Next we will cover the disassembly procedure for the Master Lock lever set (see Photograph 8). It is very similar to



A. On earlier locks, two stops are required per cylinder.

rekeying a Master Lock knobset, the major difference is in how the cylinder assembly is removed from the outside lever assembly.

To disassemble, you must first

remove the cylinder assembly from the outside lever assembly. To do so, hold the outside lever assembly in one hand with the rose resting in the middle of your palm, and grasp the notches of

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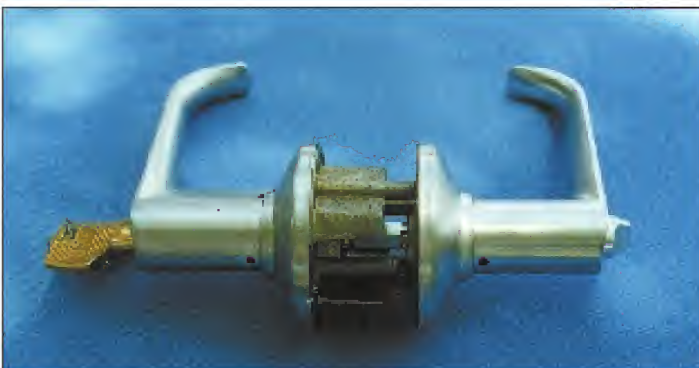
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6. Remove the C-shaped retaining ring with tweezers or small screwdriver.



7. You are now ready to rekey the key plug.



8. The Master Lock leverset.



9. Depress the round button on the side of the lever with a small screwdriver or punch.

away from the lever assembly. While pulling out on the turnbar, turn the key counterclockwise 180 degrees and then release the turnbar (see Illustration B).

Now grasp the outside lever assembly securely in one hand and depress the round button on the side of the lever with a small screwdriver or punch. (see Photograph 9).

Pull the lever off outside assembly and set the assembly aside (see Photograph 10).

NOTE: The round button cannot be depressed and the lever removed unless the key is inserted and rotated 180 degrees and the turnbar is in the unlocked position shifting the internal cylinder block out of the button's path.

Next, we must remove the cylinder assembly from the lever. To do so, rotate the key clockwise 180 degrees, then remove the key from the lever handle. Now you must remove the cylinder set-screw on the back side of the lever by rotating the screw approximately 90 degrees and sliding the assembly out of the lever (see Photograph 11).

The disassembly and re-assembly of the cylinder is almost the same procedure as for the knobset, however there are a few minor differences.

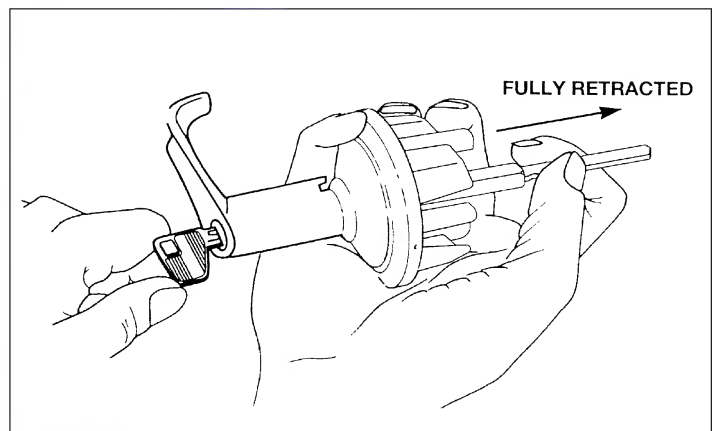
To rekey this cylinder, you must remove the retaining ring, being careful not to over-stretch it while removing it. Now you can remove the stop washer and set it aside.

Next remove the cylinder stop (notice that it is in a different position than the one on the knob lock) Finally, remove the C-shaped retaining ring with your tweezers or small screw driver.

To remove the key plug from the cylinder assembly, you must turn the

the turnbar between your thumb and index fingers.

Next, Insert the operating key into the outside lever assembly. Now pull out on the turnbar with your thumb and index finger and fully retract it



B. Turn the key counterclockwise 180 degrees and then release the turnbar.



10. Pull the lever off outside assembly and set aside.

lever plug to the 9 or 10 o'clock position. Be careful not to align the cylinder stop slot with the pin stack. Next, using the following tool, push the plug out of the cylinder assembly.

To reassemble, place the cylinder into the lever handle and insert the cylinder retaining screw, turning it approximately 90 degrees. Next, insert the key and turn it 180 degrees counterclockwise. Place the lever onto the housing, pushing it all the way forward, stopping at the retaining button. Depress the retaining button and push the lever handle all the way until the

button pops back into place.

Next, grasp the turnbar and retract it so that you can turn the key 180 degrees clockwise and remove the key out.

You should now be able to service both the Master Lock Knobset and Leverset with ease.



11. Remove the cylinder set-screw on the back side of the lever by rotating the screw approximately 90 degrees.

Points to Ponder:

The best way to escape a problem is to solve it.

TNL

NATIONAL

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**COVER
STORY!**

TOOLS TRADE

INTRODUCTION:

How many times have you said to yourself, "If only I had that new widget, it would sure come in handy now?" Well, this is just a sampling of the must have tools every locksmith dreams about. After scouring the following pages, there should be no shortage of ideas for your Christmas wish list. There's plenty of stocking stuffers as well.



EVERSTAMP KEY STAMP HOLDER BY H.A. EVERS CO.

Quick and easy-to-use for faster key markings. Handy spring-loaded device suspends every 3/8" X 3/4" shank die stamp in place...ready for instant use. Simply slip key hole over the locating pin with one hand and hammer-strike the die with the other.



THE TOOL PAK "TOOL TOTE" BY PAKTEK

Paktek discovered that the two biggest complaints about tool boxes are (1) They're clunky and (2) "They damage surfaces when they bump into them. So they set out to answer the question "How do you create a cutting-edge tool



box, without the cutting edges?" Their answer: The Tool Pak Tool Tote.

Made from 1000 Denier cordura, it's designed to be strong as iron, but without the hard edges that scratch, dent and gouge.



SLIDE LOCK TOOL COMPANY SHINES "LIGHT" ON THE SUBJECT

When the job calls for an inspection light, whether it be for door cavity viewing or safe work, Slide Lock Tool Co. has the perfect solution. Their aluminum bodied, D-size light has a flexible wand that successses 1/8" openings and supplies over 5 times the power of AA size lights.

LOCKMASTERS' NEW HIGH SPEED AND CARBIDE- TIPPED HOLE SAWS

Use Lockmasters' new high speed hole saw with pilot bit and arbor to effectively cut through the outside skin of GSA

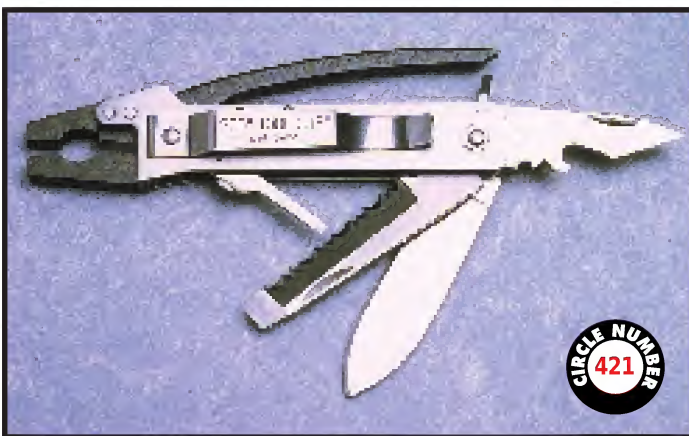


Red Label security files. Then, switch to the carbide-tipped hole saw to cut through the hardened drawer head bolts. These hole saws (with carbide tooth tips) cut through materials that standard bi-metal hole saws will not. Some additional advantages to using the carbide-tipped hole saw include: greater wear resistance than bi-metal, greater heat resistance than bi-metal, 1-1/2" (38mm) cutting depth, precision ground angles and clearances, and faster cutting rates.



'STEELMAN' ENGINEER II ADVANCED ELECTRONIC LISTENING TOOL

'STEELMAN' has completed the production of a NEW advanced electronic stethoscope which dramatically outperforms all ordinary listening tools. A new level of problem solving - the ENGINEER II, with seven (7) db sound settings enables the operator to select the correct frequency from 60 db to 120 db, adding clarity to all types of noise.



JENSEN'S ULTIMATE TECHNICIAN'S POCKET KNIFE

A compact ToolClip, combining 13 functions in one powerhouse pocket tool, has been introduced by SOG Specialty Knives. This is the technician's choice - a veritable tool chest in the palm of one hand. It may easily be one of the most complete all-purpose tools ever made. The SOG ToolClip features a full jaw pliers, gripper and wire cutter combination that can easily handle chain link fencing, a

Continued on next page.

'My favorite tool is...'

Rytan Plug Spinner

My choice for a great tool is the Rytan plug spinner. It allows you to quickly reverse a cylinder that is picked in the wrong direction. It turns fast enough to prevent the plug from locking up again and saves you the time of picking all over again. It is well made and came with replacement blades in case one breaks. After eight years of use on hundreds of locks, the original blade has not broken yet. Often the customer is more impressed with my spinning the plug than with my picking the lock. Any locksmith who doesn't have a plug spinner, doesn't know what he is missing!

Mike Spencer
Canada

Grobet File

The other night one tool that became my favorite is the Grobet 6" warding file. I was called to make a key for a 1987 Jaguar, the customer had lost his door key and was leaving in the morning for the city. I didn't have the correct blank so I went to the key board to find one that was close and came across a MIT8 blank. The grooves were right but the blade needed to be more of a paracentric type, so with a little time with the file I had a key that would enter easily the lock. My customer was very happy and the next day I ordered the right blank and contacted the customer to make him the proper key when he returned from the city.

Charlie Dill
New York

Pick-O-Matic

I was called by a Realtor to rekey all the locks and deadbolts on a house that had four outside doors and a double door utility room in the back. There was no keys available so with my

trusty Vibrating Power Delco Pick-O-Matic Pick unit, and a few squirts of Lubecon Drop'L Do thin-film/dry-film penetrating spray, I was done with the job in no time. The Realtor was happy that the job was done as per his exceptions.

Bruce Richardson
Arizona

Jiffy Super Probe Light

Recently I was called to make a key for a late model Mitsubishi in a very bad section of town. After witnessing a few drug exchanges, I realized it would be better if I got out of there fast. Since my customer was stranded, I realized I had better come up with something fast. Finding no key codes in the glove box, I took out my Pro-Lok Jiffy Super Probe Light System, shinned the light down the passenger door just over the lock cylinder and found the code. I cut the key and was out of there in a flash. This awesome light with super illumination saved the day for me and my customer.



Alan E. Torres
Oregon

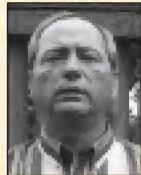
Quick Pull

I want to nominate the Quick Pull by A-1 for a top tool award. I purchased this tool to remove the cylinder from the Kwikset type knoblocks and before I had a chance to try it in the shop, I used it in the field (something I don't like to do). It was lightly raining and I was trying to pick a knoblock open on an apartment with no porch or gutters and the lock was installed upside down. A frantic woman and her screaming baby added to the water streaming down my back, gave me the

Continued on next page.

Continued from previous page.

incentive to try my newly purchased tool. With a prayer on my lips, I inserted the tool into the keyway and turned the large wing nut and the cylinder came out easier than I dared hope. I reached into the hole and turned the activator rod with my trusty little needle-nose and we were in. I know picking is the preferred way and if possible I do it that way, but this tool really works and I'm glad we got two.



G. Henderson
South Carolina

EEZ-Reader

I'm not much of a writer,

but I do have a favorite tool. Just after I got started in this profession, I heard about these great little tools called EEZ-Reader. For those of you nodding your heads, no more needs to be said. I am pleased that they have been receiving attention lately. With these tools and your favorite code machine, first keys are only minutes away. Too many times, (such as rainy nights) these tools have saved me precious time and energy, not to mention the professional pride, and gotten a customer on their way quickly without the need of any disassembly.

F.L. Jackson
Florida

TRN

Continued from previous page.

razor sharp spear point blade, serrated edge and utility blade, two screwdrivers, two wire strippers, a file, pry bar, and bottle opener - plus a heavy duty pocket/ belt clip.



CIRCLE NUMBER 423

KEY STAMPING PLATE BY A-1

A-1 Security Manufacturing has recently announced it has added a Key Stamping Plate to its line. While the plate is primarily designed for Interchangeable Core, it will also accommodate many other keyblanks such as Schlage, Corbin Russwin, Kwikset, etc...The plate will accommodate up to 10 keys and 5 I/ cores mounted on the side and 5 mounted face up. Manufactured of Delrin® this plate absorbs the shock of stamping so that keys remain in their pockets. May be bolted to workbench.

THE DREMEL MULTIPRO CORDLESS

Dremel introduces a rotary tool that can accomplish over hundreds of different tasks. The MultiPro Cordless tool,

which offers over 150 attachable accessories, is a 7.2 volt, two-speed (7,500 - 15,000 rpm), hand-held rotary tool that provides users with the versatility to perform a variety of activities with professional performance. The 7700 kit includes tool with removable battery back, 3 hour charger, 25 accessories/ bits and storage case.



CIRCLE NUMBER 424

THE ACCUMARK BY SECURITY CORNER

Security Corner in Mansfield, Texas decided that advertising costs are increasing so rapidly that something had to be done. With the Accumark you not only have a lifetime advertising tool, but one that with a one-time expense can make life long customers for us and now for all professional locksmiths. This particular tool made of hardened machine steel not only permanently imprints every key duplicated, but also imprint mortise cylinders with the company name and telephone number.



CIRCLE NUMBER 422



CIRCLE NUMBER 425

PS-2000 FLEXIBLE LOCKSMITH/SAFEMAN FIBERSCOPE SYSTEM BY MDS

The new PS-2000 Locksmith/ Safeman fiberscope kit offers features not available on even the most expensive scopes yet it is the lowest priced scope of its kind in the industry. It's a diagnostic tool that will save you time and make you money! Now you can attack that hi-tech safe from the back or sides with ease!

Continued from page 42



NEW STYLE GSA SAFE SAVER PIN BY LOCKMASTERS

This new GSA Safe Saver Pin is designed specifically for repairing Black Label and Red Label GSA safes and vaults, Class 5 and 6. Each pin is pre-cut and sized to conveniently fit. No more cutting off excess pin length!



AABLE'S FORD 8 WAFER IGNITION REMOVAL TOOL KIT

Frank Markisello CRL, of Aable Locksmiths, has designed a tool kit to remove these ignitions. You can turn all these ignitions including the Mercury Villager, and Nissan Quest, to the on position in less than 5 minutes for fast removal. No damage to the lock, just fit the key to the coded wafers and you have one key to all the locks. Or, use the side bar breaker tool and turn the ignition to the on position in 60 seconds. Again, no damage to the wafers, just fit the key to the wafers and install the wafers in the new plug. You will have one key to all locks.

THE EQUALIZER BY LOCKMASTERS

A quick-connect coupler on the Equalizer securely holds the motor as you work your way through hardplate. This safety feature keeps the motor from spinning if the bit grabs in touch hardplate. The Equalizer is designed to work with the Bosch 1194 VSR Hammer Drill and the Milwaukee



Heavy Duty 1/2" Magnum Hammer Drill described on page 4. The motor is mounted in a lightweight metal housing.



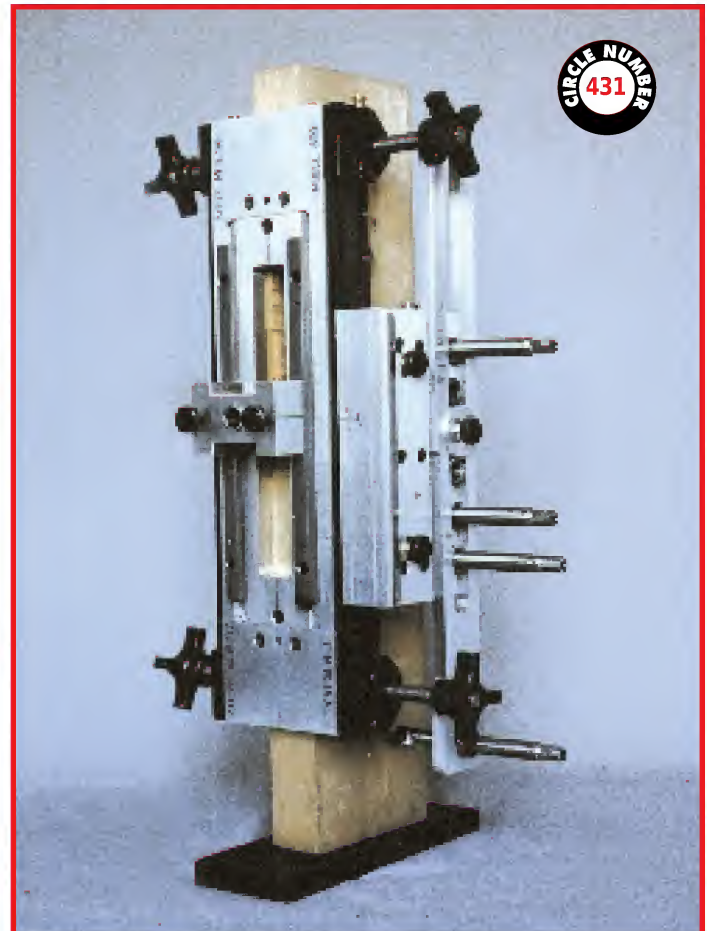
PRO-LOK INSPECTION LIGHTS

Powered by a cord from your truck (right), a 12v Makita® battery/ adapter, or rechargeable Ni-Cad belt pack, PRO-LOK's professional quality 12 volt Halogen Super Probe offers unmatched brilliance. Or, the 6 volt Halogen Super Probe shines from you 7.2 v or 9.6 v 12 v Makita® battery in an adapter.

PRO-LOK manufacturers another unique inspection light. The HardBody (left) is machined from sturdy aluminum and features a black powder-coat finish.

KEEFE PRESENTS THE MODEL 800 INSTALLATION FIXTURE

Keefe Manufacturing Company presents the Model 800 Installation Fixture. The fixture can be set up for mortise



Continued from page 44

locks, key in knob, deadbolts, flush bolts and door repair. The unit comes complete with carrying case and quick release bits. Can be set up for virtually any lock made on any door.

HAWKEYE 7 BORESCOPE

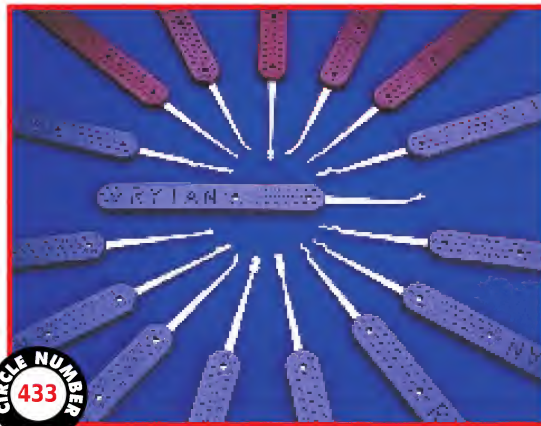
\$299.00 for a borescope? Yes, the price is correct and the quality is excellent. This economical light provides a crisp, bright view at an affordable price. Uses a



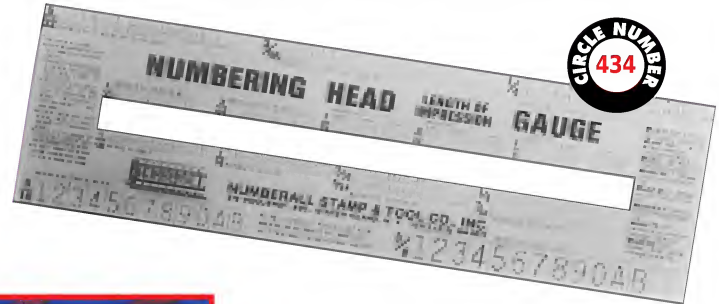
Mag-Lite® flashlight as a light source. The standard view is straight ahead, with a 90 degree adapter optional. It's working length is 7". Two other lengths - 12" and 17" are also available.

RYTAN SLIM-LINE™

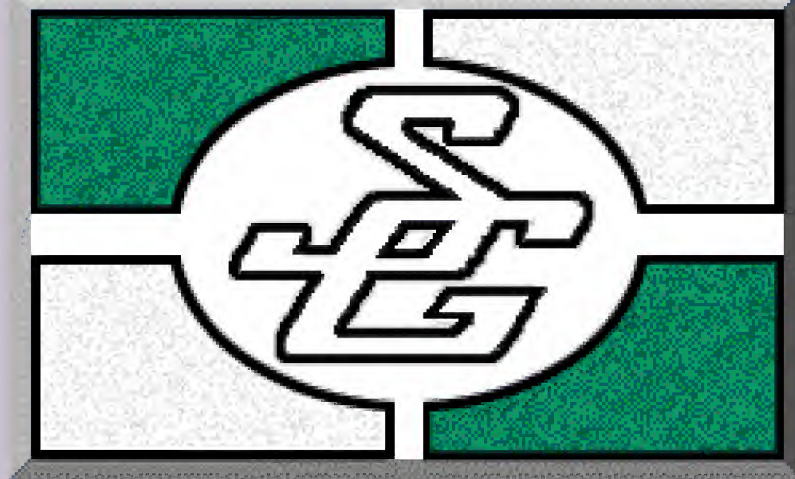
Slim-Line™ professional lock picking instruments from Rytan, Inc. with durable stainless steel pick blades permanently fused into sleek handles create an improved "feel" while picking as the



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CIRCLE NUMBER
435

HPC's POCKET SIZE DECODER KIT

HPC's handy, pocket-sized decoder kit (No. HKD-75) Determines the original factory depths of most popular domestic pin and disc tumbler cylinders and automotive keys. It is ideally suited for giving the correct bottom pin size when re-keying new or worn cylinders. It is also an effective time saver when used along with the popular, precision color pin assortment or when using original pins. The kit comes complete with 112 information cards, 3 shims and a plastic carrying case.

DAREX PRECISION CUTTING TOOL SHARPENERS.

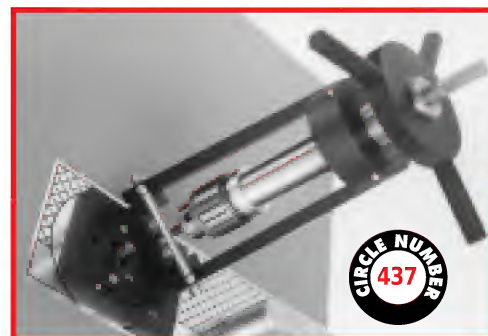
We are so sure you will be impressed with the quality, accuracy, and simplicity of Darex drill, endmill, tap, reamer, and countersink sharpeners that we invite you to try one in your shop for a Free 30 Day Trial.



CIRCLE NUMBER
436

MINI RIG PRO KIT BY STRONG ARM

Strong Arm Inc. presents the improved "Mini Rig Pro Kit." Exclusive snap action mounting makes



CIRCLE NUMBER
437



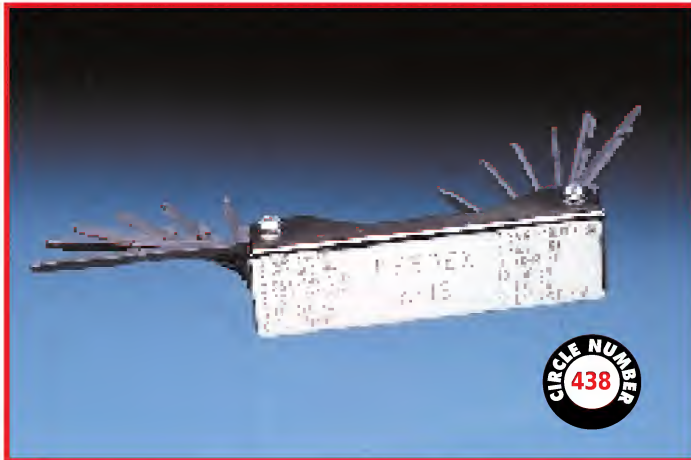
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inspection or changing bits faster than ever and spoke turning handles add comfort and control. The kit includes the rig, dial puller, drill point mounting templates and everything needed for multiple attaching methods, in a rugged custom fitted case. Strong Arm also supplies razor sharp safe drill bits plus the lowest prices on new Diamond tip core drills.



KEEDEX K-18 CHANGE KEY SET

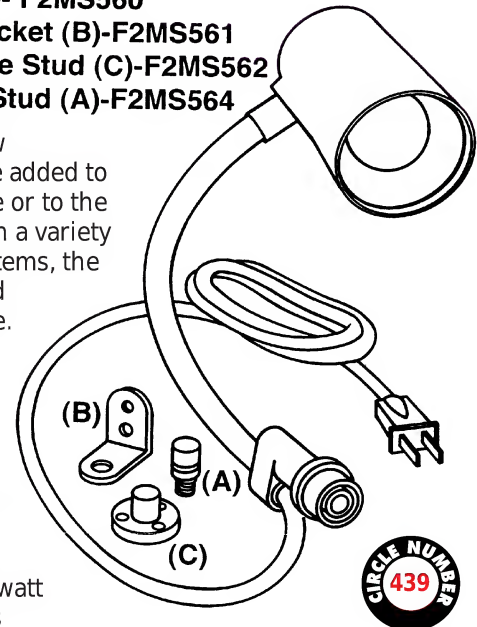
The Keedex K-18 Change Key Set consists of the twelve most common change keys. Each key is individually labeled, for easy identification. The keys are made of stainless steel for durability. No more searching through your tool box for

the right change key. Also available, is the K-GSA Government Change Key Set.

FRAMON'S WORKLIGHT

Light-- F2MS560
L-Bracket (B)-F2MS561
Flange Stud (C)-F2MS562
MS1 Stud (A)-F2MS564

Framon's new worklight can be added to any key machine or to the workbench. With a variety of mounting systems, the light can be used almost anywhere. A patented ball bearing mounting system allows the light to be moved from one location to another quickly and easily. A 40 watt appliance bulb is included with the light.



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CIRCLE NUMBER 440

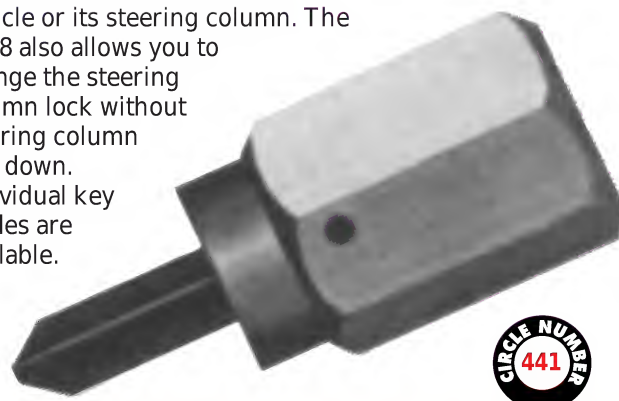
MAJOR MANUFACTURING HIT - 462

Major Manufacturing has packed their popular HIT-45 series installation tools in a deluxe kit. All that is required to start installing Adams Rite locks, electric or armored strikes, is a router and basic hand tools. Included at no charge with the purchase of the kit is an assortment of aluminum door security products. Utilizing a modular design, the Adams Rite installation kit may be upgraded for mortise lock installations at any time. Free goods offer expires 12/31/96.

"SURE-SHOT" BY-PASS KEY TOOL BY LTI

This tool will start most Ford 10-cut key vehicles (1984-1/2-1996 cars trucks and vans) without damage to the

vehicle or its steering column. The LT78 also allows you to change the steering column lock without steering column tear down. Individual key guides are available.



CIRCLE NUMBER 441

IN CONCLUSION:

You've heard it time and time again. The right tool for the job makes all the difference in the world. Nothing could be more true. Building your arsenal of tools is like building your arsenal of knowledge. The more you have the more you can do, the easier you can do it and the more profitable and desirable you will be. Don't think of tools as an expense, but rather as an investment in your future. Circle numbers for the tools that most interest you and begin investing in your future.

TNL



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The Mystery of Door Closer Installation

What possible mystery could there be to installing door closers? How hard could it be? It is as simple as putting a wheelbarrow together. All the nuts and bolts of the puzzle are there. The key to solving the mystery is the manufactures "Installation Instructions." All manufacturers have very easy and explicit instructions with visual aids, which from time to time are updated due to engineering and manufacturer changes. This insure that the correct installation procedures are followed.

There are three basic methods of installing a surface closer. They are:

- 1) Regular Arm
- 2) Top Jamb
- 3) Parallel Arm

We will examine each of these methods and highlight some of the areas that may be a mystery.

Regular Arm Installation

The closer is mounted on the hinge side (pull side) of the door at the top (see Illustration 1).

Top Jamb Installation

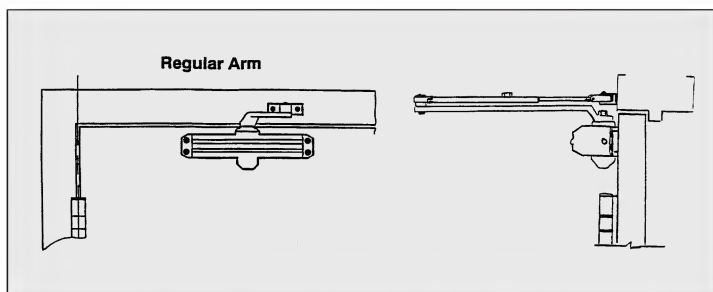
The closer is mounted on the head of the frame on the push side of the door, opposite the hinges (see Illustration 2).

Parallel Arm Installation

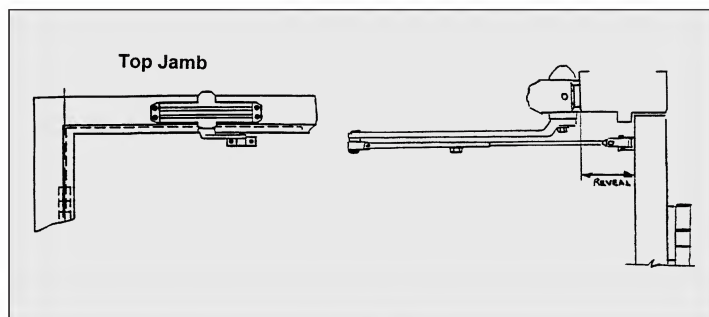
The closer is mounted on the push side or stop side of the door, opposite of the hinges (see Illustration 3).

I want to mention here that I have not included the "Corner Bracket" installation due to the fact that this used to be the only alternative method of installing the door closer on the push side of the door (see Illustration 4). This application has virtually been eliminated with the improvement of the modern day closers which now can be installed either parallel arm or top jamb.

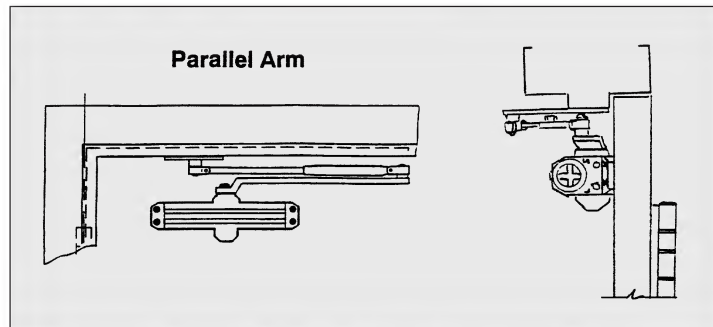
Progress in engineering has also created the "Slide Track Closer" (see



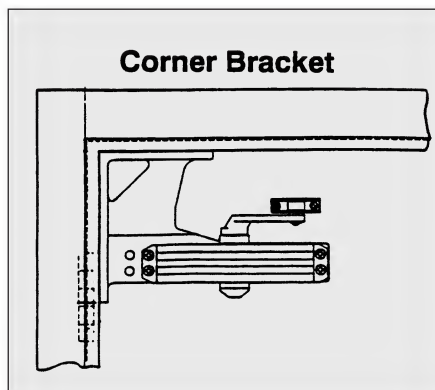
1. On a regular arm installation the closer is mounted on the hinge side (pull side) of the door at the top.



2. On a top jamb installation the closer is mounted on the head of the frame on the push side of the door, opposite the hinges.



3. On a parallel arm installation the closer is mounted on the push side or stop side of the door, opposite of the hinges.



4. The "Corner Bracket" installation used to be the only alternative method of installing the door closer on the push side of the door.

Illustration 5). The installation methods are similar to those we mentioned above except for:

a. The arm does not project, making for an uncluttered appearance and protection against vandalism and abuse.

b. The maximum degree of opening allowed is 110 degrees.

c. The top jamb installation requires a minimum of 4 inches on the head of the frame.

Before we examine these applications, be aware of the hand (swing) of the door. With the introduction of the non-handed door closer into the market, this has become an area of neglect and is over looked. Some manufacturers still offer handed closers for some of their models or specific installations. Before you can even attempt to install the closer, make sure the hand of the closer matches the hand of the door.

While the swing of the door is important, so are the dimensions of the top rail of the door and the frame head. All closers require a minimum amount of space that it has to have to be installed properly.

Job conditions change from week to week and sometimes day to day and the installer needs to be aware of this fact, as alternative methods are available to solve this mystery.

If the closer is now handed, we can begin. The closer package contains the body, the arm, the cover (if furnished) and sometimes brackets for different installations, fasteners

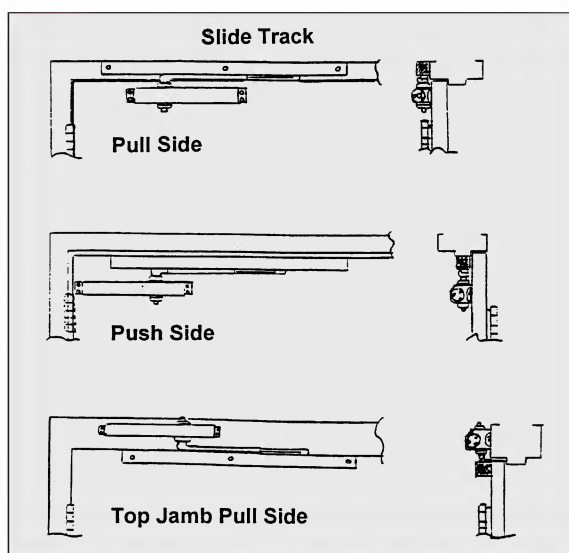
and for some manufacturers, a closer mounting bracket, and "The Instructions" read them

Regular Arm


The very first thing that will be required, not only on this installation, but for any closer installation is the "Degree of Opening" required for a particular door. Part of the mystery here is that the installation instructions offer a wide range of door opening degrees to pick from, which one do I choose?

The location of the door in the opening will determine the answer to this question. The rule of thumb is to always install the closer to the maximum degree allowed by the manufacturer for that particular method being used. Whatever choice is determined, it is the starting point which the installer needs, and from which all other dimensions are taken.

The next key is to locate these dimension. They are taken from the centerline of the hinge or pivot, not the edge of the frame or door, and from the underside of the frame rabbet not the top of the door. If special hinging or pivot points are required, these dimensions will change.



5. Progress in engineering has also created the "Slide Track Closer" for an uncluttered appearance.



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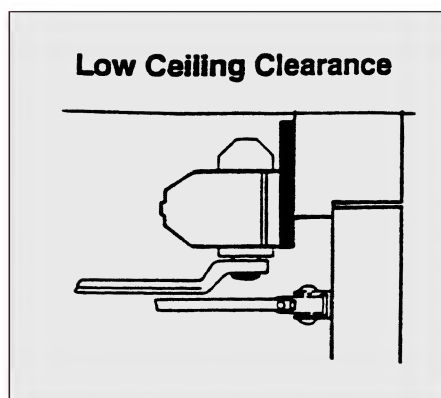
Contact the manufacturer and special templating, with the correct dimensions, will be sent to you. A drop plate (an accessory for use where the door prevents the closer from being mounted directly to the door surface) may also be needed. Once all of the information and dimensions are known and located, install the closer in accordance with the balance of the instruction.

Top Jamb

Follow the same procedure as mentioned for the regular arm. The difference here is, the closer is installed on the face of the frame at the head, not on the door (see Illustration 6). I caution the installation, as the mystery here is, what is the clearance from the top of the frame head to the ceiling? This may or may not be a concern, but if it is, more often than not, a drop plate will need to be furnished, thus putting the location of the closer in a different position than if a drop plate were not furnished.

Another factor to consider for this installation is deep reveals. A reveal (shown on the illustration) is that area, between the inside face of the frame.

Each manufacturer has a maximum reveal dimension for the standard arm, packed with the closer. Where the reveal is greater than indicated, a special long arm will be required. These deeper reveals may also limit the degree of opening.



6. The low ceiling closer is installed on the face of the frame at the head, not on the door.

Parallel Arm

The installation of this closer requires that a parallel arm bracket be used to permit fastening the arm to the stop of the frame rather than the

face of the frame. This lowers the starting dimension for installation on the top rail of the door. The earlier caution about the amount of space needed for this installation is very critical. Some door closers require as much as 6" to 6-1/2" of top rail for this application. An even larger top rail is required where special offset arm brackets are used to permit clearance of other hardware items and weather stripping. The required dimensions for each manufacture's door closers are shown on their installation instructions.

This particular installation is more adaptable to the use of additional hardware, such as surface overhead stops and holders and/ or soffit applied weather-stripping or sound seals, more than the others. When this occurs, a red light should immediately go off, as now we have the possibility of two or three pieces of hardware occupying the same installation space. The positioning of the surface overhead stop and holder is more critical, with regard to the degree of stop or hold open, than the closer, and should therefore be installed first.

We can always increase the "degree of door swing" for the closer which in



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turn decreases the dimensions for locating the parallel arm bracket, to avoid interference with the jamb bracket of the overhead stop or holder. As for the weather-stripping and/or sound seals, a different parallel arm soffit bracket may be required. If interference still exists, an alternative product or method may have to be employed.

Are we now finished? Is that all there is? For all of the installations mentioned, do not walk away from the opening until all of the valves are adjusted on the closer so that the door operates (opens, closes and latches) properly. An additional point I want to mention is that the arm of the closer should never be used to stop the door. If we make a closer do work it was not intended to do, we lose the efficiency and its primary function which is to "close the door".

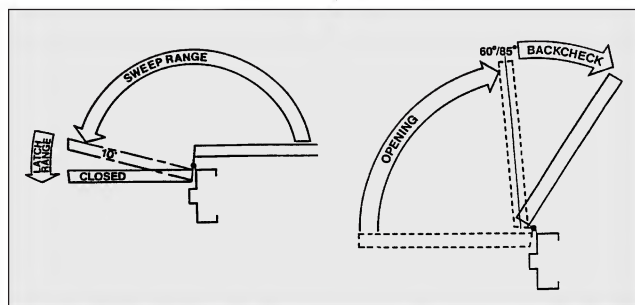
Let's briefly work through what the adjustment valves are and what work they perform. We have a sweep or general closing speed and latch speed which are common on all closers. The "sweep" adjustment controls the speed of the door from fully opened to approximately 10 degrees of closing.

The "latch" adjustment controls the speed of the door for just the last 10 degrees, to assure positive latching or quiet closing for non-latching doors. In addition there maybe a "backcheck" valve which provides hydraulic resistance to door opening beginning at approximately 70 degrees of the door opening swing. Never close this valve completely. It is not to provide a positive stop. The "delayed action" valve is an optional feature which allows the door speed to be controlled in the closing swing from fully opened to approximately 70 degrees from closed (see Illustration 7).

This was designed for the physically challenged and those in wheelchairs, to move through the opening without impeding their progress. It can also be used in openings which require the movement of equipment and supplies.

In addition, door closers have accessories which are available for special installation applications and

they would be furnished with the closer including any special templating or installation instructions. It is also extremely important to follow the instructions when installing a "Concealed Closer". As they are concealed in the head of the frame or top of the door, in either aluminum,



7. The functions the valve adjustments perform are: sweep, latch, backcheck and delayed action.

wood or hollow metal door and frame application, if the same general format for installing surfaces closers is followed the "mystery" is also eliminated.

Here's hoping that some light has now been shed on the installation of "Door Closers" and some of the mystery has truly been solved. **TRL**



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Caught By A Forensic Locksmith

by Donald Shiles

Many people, including locksmiths and investigators, believe that Forensic Locksmithing is an impossibility. Impossible, because they feel that no one can stand up in court and positively testify that a lock has been picked, or bypassed. What they fail to realize is that there are two different types of evidence. One of which can be testified to in a court of law. The other, and possibly even more important, is that which can be used by an investigator to solve a crime.

Once an investigator has identified the perpetrator, there are other means of obtaining evidence, including a confession, which will stand up in court. Let me tell you about a recent case which I assisted the criminal investigators in solving. This case occurred on a government installation and involved a safe burglary in a commercial establishment.

I was called early one Saturday morning and asked to assist in the investigation by examining the physical evidence at the scene which involved the locks, alarms, the safe and other physical security devices. The manager of the facility had unlocked the front door of the building and discovered the safe open, the cash boxes broken into and about \$5,000 in cash missing. There was no apparent evidence of forced entry to either the outside entrance doors or the safe itself, however, the four cash drawers had been forcibly opened with a screwdriver or similar type tool.

Upon my arrival at the scene, I examined the front door and lock. The door had a relatively high security mortise lock (Corbin Russwin) with pick resistant pins. There were no external signs of a picking attack on the lock nor indications of an attempt to use a straight knife or similar tool to force the bolt back. Examination of the rear door revealed a Kwikset knob lock which was the only lock securing the door. There were no signs of a

picking attack; however, there was evidence of forced entry of the bolt on the face and edge of the door itself. The marks appeared to have been made by a standard flat bladed screwdriver. There were numerous scratch marks on the bolt. Some appeared to be new, while others gave the appearance of having been there for some time.

The wooden door was brand new and held no other marks except for the new ones. The door was improperly mounted and the dead lock was not being engaged by the strike plate, thereby allowing the bolt to be worked back with a sharp object. There was a sticker on the door stating that the building was protected by an alarm system.

Inside the building, I discovered an interior office door which had been opened with no signs of entry by anything other than a working key. There was an S&G 6730 Group 2, lock on the safe which had been opened by the combination, and gave no indication an auto-dialer had been used. This meant the lock had either been manipulated open or opened with the combination. The metal cash boxes had been removed, placed on the floor and forced open, probably with the same screwdriver used to open the rear door.

I was able to question the manager and asked her about the alarm system. She told me that it had just been installed and was not scheduled to be activated until Monday morning. She also told me the rear door had just been replaced a few days before, but the original knob lock had been retained. I asked her who knew the combination to the safe and she revealed that she, her assistant manager, the night manager and the cashiers all had access to the combination.

When I asked her when the combination had last been changed, she explained that it had not been changed during the last two years. She told

Continued on page 72

Continued from page 70

me that she hired a lot of temporary and part time help and could not tell me how many employees had worked there during the last two years. A key to the administrative office was maintained on site and all employees had access to it.

As we talked about the new door and old lock, and the fact that someone had straight-knifed the latch, she told me that her employees used the back door to take out the trash. She also told me that frequently the door would blow closed and rather than walk around front to bring the trash cans back in, the men would use a pocket knife or other tool to force back the bolt and reenter the building. She thought that she had overcome that problem by having the new door installed. I decided I had enough information to answer the investigators' question as to whether this was a professional job by a trained Break and Enter specialist (B&E) or whether it was an inside job, as they suspected.

Let's review the salient facts. The outside door had a Kwikset lock which could have been picked with little

difficulty. The lock had a dead lock feature installed which normally would have precluded straight-knifing. There was an obvious alarm company sticker saying the door was alarmed, however, the alarm had not yet been activated. The key to the inside door was available to anyone who looked for it in a nearby desk drawer. The S&G lock could have been manipulated open by a trained individual. The cash box locks were not picked but forcibly opened. Putting all of these facts together it was plain that an experienced burglar had not committed the crime.

Someone highly qualified and trained to manipulate the safe lock would have picked the door knob lock and probably would not have even attempted to force the bolt. By considering some of the evidence further, I was able to eliminate former employees even though the safe combo had not been changed in a long time. There were several factors which entered into that. First, the alarm system; only the current employees would have known the system was not yet operable and only current employees would have known that the new door could still be forced open. I

then offered my professional opinion that one of the 10 or so current employees had committed the crime. Because of the lack of proper security procedures and security awareness, I suggested they not limit their investigation to those having authorized access to the safe combination.

Without any evidence that could be used in court, they were able, through interrogation of all employees, to identify and obtain a confession from an employee of the facility.

Does it take a genius to conduct this type of investigation? No! It does, however, take someone with some knowledge of locks and devices and the application of some common sense. Is there a need for this type of forensic examination? Yes! Should we, as locksmiths be prepared to offer this type of service? Again I say, Yes! Even though we cannot stand up in court and testify that a lock has been picked open, we can still offer an invaluable service to the law enforcement community by furnishing a professional opinion that goes beyond the limit of most police, forensic and criminal investigators' abilities. **TRN**

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The **WIGGLE** Side

Avoiding Mistakes



by
**Sara
Probasco**

"I won't do it," Don said, setting the telephone receiver down, hard. "I will not have Keith sterilized."

"What in the world are you talking about?" I asked.

"The hospital job."

"What's the problem?"

"I made the mistake of telling them we'd rekey a couple of cabinets for them, this morning. I didn't know they were in a sterile area. They won't let Keith in there without sterilizing him and all his equipment." Don was steamed.

"Is this so very different from the time you did that work at the allergy clinic?"

"You mean the time I made the mistake of wearing after-shave and scented deodorant?" Don asked.

"If I'm not mistaken, the doctor made you wash before she would let you come into her office to do the work," I said.

"This is more involved," Don said. "Keith would have to go through complete sterile scrub procedures every time he went in and out of the room. Besides, every one of his tools would have to be run through their instrument sterilizer."

"They can't move the cabinets out into the hall, or something?" I asked.

Don shook his head. "They're built in."

"Well," I said, "seems to me we have two choices: charge them extra for the time and trouble of going through their procedures, or find some way to have them remove the locks so Keith can work outside the sterile area. Then hospital personnel can sterilize them before they take them back in to install."

Don made his decision.

"Sorry, we're not going to be able to do this," he told the man in charge. "Our insurance won't cover it," I heard him say. "You're the ones with malpractice insurance. ...Our man is

only part of the problem. How are you going to sterilize our power tools sufficiently to guarantee they won't contaminate the area?"

The man saw Don's point and found a way to have sterile hospital personnel remove the locks for Keith to work on elsewhere. Keith and his tools could remain "septic."

Later in the day, Don came into my office.

"Did Keith get through at the hospital?" he asked.

"I think so. Ask him."

"I thought he was on a call, repinning a couple of door locks across town."

"Nope. He's in there at the bench, cutting a key by code."

Don peered out at the work bench. Sure enough, Keith was at the code machine. He was not smiling.

"Did you get that repinning job finished?" Don asked him.

"Not quite," Keith replied.

"Then what are you doing back here? They didn't mention needing keys by code."

"I'd rather not talk about it." Keith glanced sideways at Don.

Don was standing in the doorway, fists firmly planted on his hips. It seemed obvious he wasn't going anywhere until he got an explanation.

"If you must know," Keith reluctantly continued, "after I got the front deadbolt repinned, I closed the door to try the key and make sure it worked."

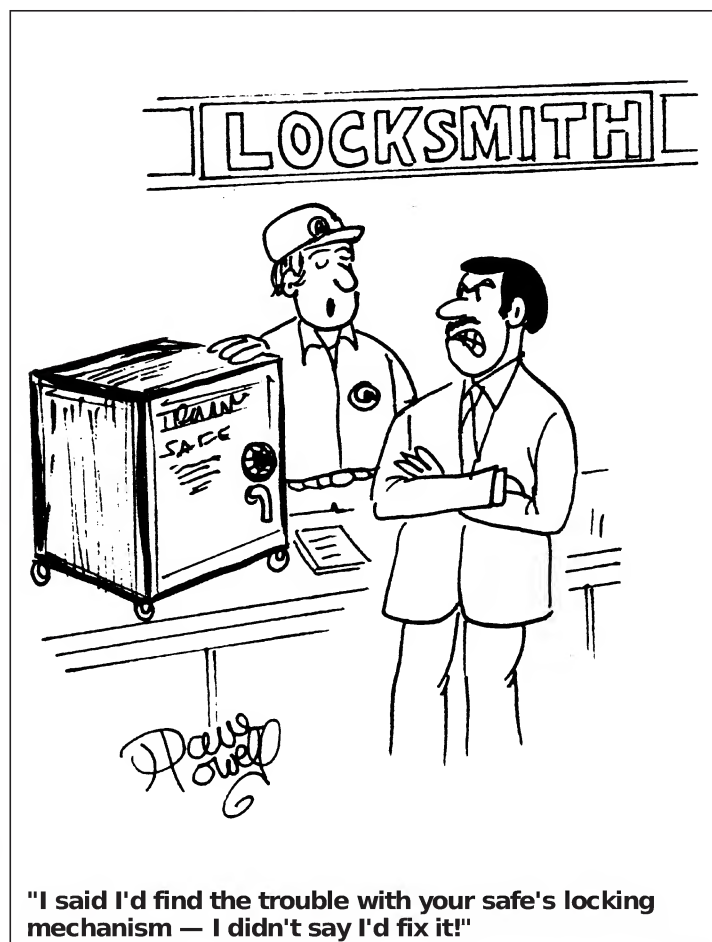
"And it didn't," Don injected.

"Oh, the key worked the deadbolt perfectly. Problem was, I'd repinned the deadbolt and the entry set differently, at the customer's request," Keith began.

"Yes?"

"And I wasn't thinking about the fact that the Schlage entry set was one that could only be opened with a key, from the outside."

"Don't tell me you locked that key inside!" Don was trying to suppress a grin.



"Now don't you start. I'm embarrassed enough, as it is." Keith couldn't help smiling a little at himself. "At least, I remembered the new pinning, so I could cut a key by code." He proudly held up the new key. "Anyhow, you're not one to be talking," he chided Don. "I seem to remember hearing about a time in Lubbock when you locked the keys inside your own service van."

"Enough!" Don cautioned.

Keith held up his hands in surrender. "Go ahead and say it. I guess there's nothing worse than locking up your own tools inside a customer's house."

"Oh, I don't know. Dennis says locking your hand in your own truck door is worse," Don said.

"What do you mean?" Keith asked.

"He was telling me he had just finished a job, recently, and put everything in his van. Then he punched the lock and slammed the door shut — right on his fingers."

"Ouch!"

"Yep. Locked his hand in the door and couldn't get it out. No bones were broken, but I'm sure it didn't feel too good, just the same."

"What did he do?"

"His keys were in the back pocket of his jeans, and he was off somewhere by himself, with nobody to help out. Can you imagine having to fish keys out of your right hip pocket with your left hand, while your right hand is squashed in the door?"

Keith winced. "Oh, man, that makes me hurt just thinking about it."

"He finally managed to get loose and apparently wasn't too much worse for the experience, to hear him tell it." Don shook his head sympathetically. "I'll bet he won't make that mistake again."

"Well, you know what they say," Keith said, grinning. "Stupid mistakes are what other people make. When we make them, they're 'unavoidable errors'."

"To err is human," I reminded them, from my office. "To really foul things up takes a computer!"

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by
Jake Jakubowski

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Ouch! Here it is, October already. Do you realize we're fast coming to the end of the year? I mean, next month we do our Turkey thing and the month after that it's HO! HO! HO! time and 1996 is over and done with! Where does the time go?

That also means if you've been intending to send me a tip and have kept putting it off, you'd best get it in gear while you still have a chance to qualify for some of the great year-end prizes we're going to be awarding.

The subject of the tip, trick or idea can be anything from how to speed up pinning cylinders to a different twist on impressioning keys, to an idea that might make our bookkeeping chores a little easier. The important thing is that you put your idea on paper and mail it, E-Mail it, fax it or send it to me by Pony Express. Just get it to me!

One thing I would like to ask you to do is this: If you send me a tip on how to make a tool from components or materials that are not commonly available, tell me where you bought the parts. If

you have discovered a tool that is not normally associated with locksmithing, but you have found a way to adapt it to fit into our work patterns, tell me where the tool can be purchased, and if possible, give me a part number. In other words, give me some solid information that I can pass on to the readers of this column.

Also, it helps that you include diagrams whenever possible. Don't worry about how "good" your drawing or diagram is because our art department will clean it up before it is published. The important thing is that you give me something that will allow me to show the readers how to utilize the information that you are sharing with them.

Now, y'all remember this: I have a bunch of prizes, locksmith bucks, folding pliers sets, tools, books and videos to give away each month. I give them to tipsters whose tips were printed in this column. The only way to get a tip printed is to send it to me See y'all next month.

AMERICAN LOCK AND SUPPLY
WINNER:

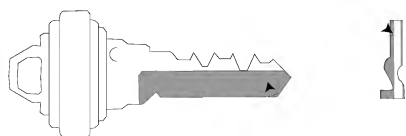
**Opening A Schlage With Broken
Tailpiece**

It's frustrating to be called out to open a lock and find out that the lock is a Schlage deadbolt and the plug is just spinning in the cylinder. Of course we all know that's caused by a broken tailpiece or actuator. So, what to do?

Well the first thing that you don't do is grab the drill! Why? Because I have a method of opening these locks that's a real snap!

First, duplicate the customer's key on a blank and modify the duplicate as shown in Illustration 1. You also have to "thin" the blank down as much as

After "shaving" bottom of blank the blade should be thinned as indicated by shading.



Remove shaded
portion of duplicate key

Illustration 1.

possible by either filing or grinding. Proceed to step two unless there is no key available. In that case you have to pick the lock counter-clockwise about 45 degrees or impression a key and modify it as indicated above.

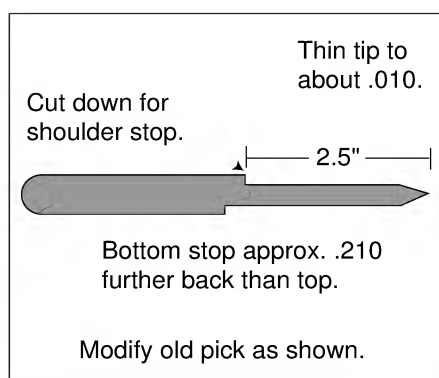


Illustration 2.

Turn the plug 45 degrees counter-clockwise, or in the direction that would normally cause the bolt to retract and remove the key (that's the reason for the modifications you made) leaving the plug turned.

Next, take an old pick and file or grind it as shown in Illustration 2, insert it through the keyway until the

"shoulder" enters the plug and the "tip" of the tool engages the lock bolt actuator. Now just "flip" the partially turned plug and your in.

All you need to do now is replace the broken tailpiece, collect your fee and you're on your way.

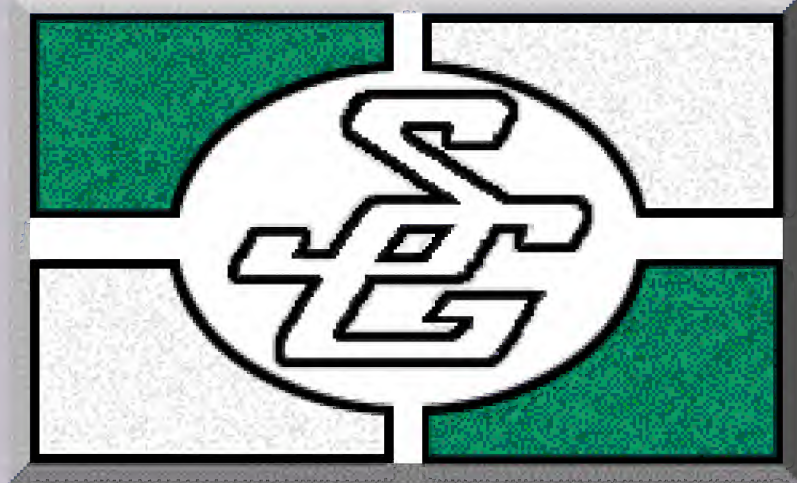
Bob Felton
Massachusetts

[Editors Note: This is a clever trick that will work providing the individual that installed the lock failed to insert the disk at the end of the plug which would negate an open passageway.]

HPC PISTOL PICK WINNER:
**Laser Cutting On A Standard
Duplicator**

After my older daughter bought a 1992 GEO, she said that her door locks were "sticking". This sounded like the old "cut a key by code and lube the locks" kind of problem. However, because of the "peaks" between each cut, the new code-cut key was harder to push into the lock — and definitely more difficult to extract.

I realized the problem was most likely caused by the fact that my daughter's key and the key I code cut had "peaks" between each depth whereas the original keys would have



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been laser cut and would not have the "peaks". I felt the peaks on the key is what was causing the keys to hang-up. To solve our problem, I decided to cut the key laser-style.

The code for her vehicle called for the following depths: 3-2-1-24-3-4-4. After making the first cut a three, I backed the depth knob up to a "two" and moved the carriage through to the number two space. This gave me a smooth "cut" from the center of the first cut to the second depth position. After cutting the number two depth, and without changing the spacing, I moved the depth knob up to a number one depth and then moved the carriage to the third spacing, and continued to the fourth space indication.

With the fourth space aligned under the cutting wheel, I dropped the depth to a number two cut, which I continued all the way to the eighth space indicator. Then I backed the carriage back to the fifth space and cut a number four depth, moved the depth knob up to a three and moved the carriage all the way through the fifth space and to the end of the blank. The final cut (a four depth) was in the seventh and eighth spaces. I simply moved the carriage to the seventh space and ran the cut all the way out to the end of the blank.

After duplicating this key onto both sides of an uncut blank, my daughter had a laser cut key that did not hang up in any of the locks. I have found that this works well on other automotive applications where a key has to be originated and a laser cut key was original equipment.

Charles D. Yeager
Nebraska

SARGENT AND GREENLEAF
WINNER:
Relocker Neutralizer

I was working on a Meilink Home Fire safe on which the dial, dial ring and wheel pack had been removed and the external relocker was resting against the handle cam. Without thinking about it, I shut the door and turned the handle. Oops!

That's what I get for being in a hurry — a lockout!

I realize this would not be considered a major problem, but I had to figure a quick way to get into this unit and finish the repairs that I started. I tried to "fish" the relocker with some bent wire stock to no avail. Then I hit upon this idea:

I used a 1/4" bolt about 5" long and a small piece of metal about 3/16" thick and 2-3/4" long, and a roll pin to fabricate my handy relocker neutralizing tool (see Illustration 3). As shown in the illustration, I cut a slot in the bolt about 5/8" deep and wide enough to accept the 3/16" metal tab. Next I drilled a hole where indicated and inserted a roll pin through both the bolt and the metal tab. The roll pin will hold both pieces together, but should allow the tab to move freely (drill a slightly larger hole in the tab).

I had to grind the tip of the tab

slightly to allow it free movement within the slot at the end of the bolt. On the other end of the tab, I ground a notch on both sides of the tab about 3/32" deep as shown. This notch will keep the tool from slipping off the relocker when I grabbed it.

I inserted the tool through the dial spindle hole and allowed the tab to drop (it will do so because of the way it's attached to the bolt) to make an "L" shape inside the door. Then I began turning the tool until I contacted the relocker. At that point I attached a pair of Vise-Grips to the bolt since the re-locker spring is a heavy



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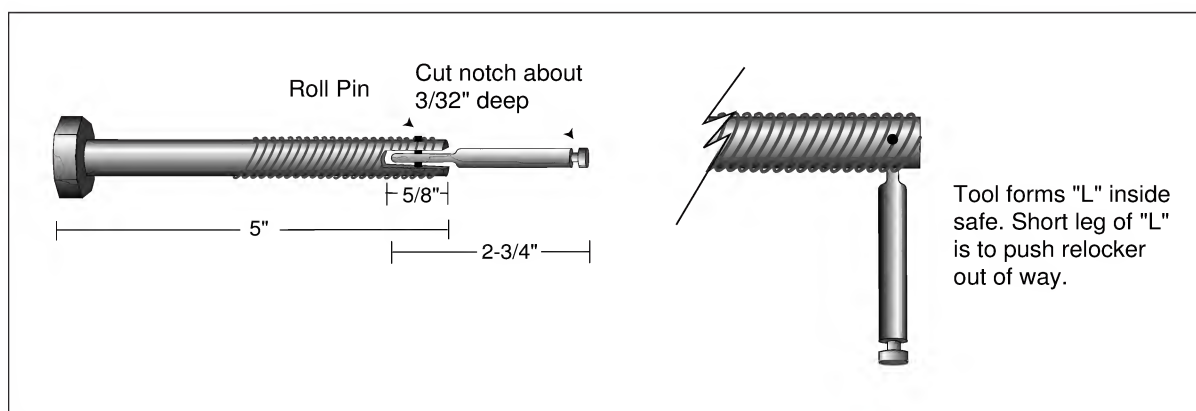


Illustration 3.

Tool forms "L" inside safe. Short leg of "L" is to push relocker out of way.

spring and will take a lot of pressure to force it back far enough to release the handle cam.

After a couple of tries I had the safe door open again!

Don Rupert, CRL
Ohio

[Editor's Note: Don showed some great on-the-spot ingenuity in solving a problem that could

easily happen to any of us. What I wanted to point out to Don and other readers that might not realize it is this: HPC makes a great set of safe tools (NST-6) that can be used to align wheel packs or turn relockers aside after a burglary attempt or a situation like that described by Don. HPC's NST-6, which has six different tools should be available from your favorite supplier for about \$100.]

SILCA KEY BLANKS WINNER **Solving Chrysler Ignition Hang-Ups**

If you have done any amount of automotive work you know how frequently customers can get their ignition key caught in a Chrysler ignition (from 1996 to 1989, in particular) when they insert the key upside down and the buzzer activator traps the key. The key's bow is such a design, that even if the customer glanced at it before inserting it in the ignition, they could easily mistake "up" from "down" on this single sided blank.

The immediate solution to the problem is relatively simple for the locksmith that is called to help the customer out. Simply use a lock pick and push down on the buzzer activator which usually releases the key so you can pull it out. Occasionally, you have to work to get the key out if the customer got a little aggressive and tried to force the key into the keyway.

At any rate, once you have solved the problem, you can hand the customer your bill, collect your service fee and head on to the next job.

What I do is let the customer know that this is a common problem and I can help them prevent it from happening in the future. I offer to mark the key by filing one side of the bow flat, or notching it with a file. I give the customer the option of choosing the "up" or "down" side of the key.

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George Steiner
Nevada

**PRO-LOCK PROFESSIONAL PICK
SET WINNER:**

Weiser Removal

When you have to rekey a Weiser and there is no key available, you don't have to take the lock off of the door to do the job. Besides the door is probably locked and you can't get inside to remove the retaining screws anyway.

First pick the lock, but when you feel the plug begin to turn: STOP! Now push your pick all the way through the plug (you might have to use something longer than the pick you're using) and push in on the inner spindle. Now rotate the plug to the eleven O'clock position and the cylinder will fall out in your hand (well, most of the time anyway) without even unlocking the door. At this point, if you want to unlock the door, use a pair of needle nose pliers to pull the spindle towards you until it clears the inner knob, turn the outer knob and you're in!

Once you have the cylinder in your hand, you can rekey it or do whatever other service may be necessary.

Don Locke
Colorado

TECH TRAIN VIDEO WINNER:

Antique Lock Post Replacement

Recently I had to work on an antique china cabinet that used a barrel key. However, the post (in the lock) was missing and although I could hold the key steady enough to open the lock, the elderly lady I was working for could not.

To solve her problem, I drilled a 9/64" hole into the back of the lock, through the original post's location. I also drilled a 9/64" hole into the end of a National 8890 key blank which slightly enlarged the original hole in the key.

I then cut off a small length of an old 9/64" drill bit and epoxied it into the hole in the back of the lock. Now I had a "new" post.

Now the customer was able to easily unlock or lock her cabinet and was happy to retain the use of the

original lock in her fine antique cabinet.

Larry Kanzer
Pennsylvania

**SIEVEKING PRODUCTS GM WHEEL
PULLER WINNER:**

Custom Car Opening Tool

Since I specialize in safe and vault work, I don't open a lot of locked automobiles. However, I recently ran into a problem when I was called to open one of the new Nissans Sentra's with the newly improved door locking system.

I know there have been some spec-

ialty tools developed to expedite opening this vehicle, but I did not have one. The car was a two-door hard-top model and I had to quickly find a way into it.

Illustration 4, shows the tool that I made from a piece of 3" round stock that I had on the truck. I bent the rod to the dimensions shown in the illustration and ground the smaller end slightly to give that end "bite". Then I wedged the top rear corner of the door, reached in with the tool and "grasped" the rubberized door handle on the inside of the car and by pulling outward on the rod, I unlocked the door.



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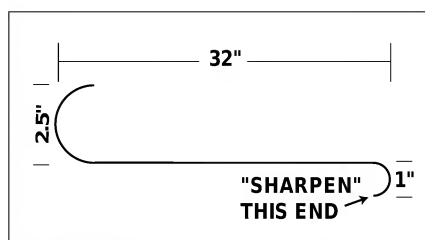


Illustration 4.

Since then I have used the tool on several occasions and my average opening time — including wedging the door, etc. — is about one minute. I have discovered that this tool does not work as well on the four-door models as it does on the two-door.

Don Shiles
Maryland

MAJOR MANUFACTURING WINNER: **Polish That Bolt**

Over the years, I have installed cam locks in all types of doors, drawers and cabinets. During that time I have tried numerous ways of marking strike locations or the area for the cam slot (when necessary) to be cut.

Recently, I discovered what I think is a great way to mark the strike location for this type of lock. I use black shoe polish.

After I drill the hole and place the cam lock in position, I install the cam and use black shoe polish on the edge of the cam. I just close the door and turn the key. The cam then presses against the area where I need to notch my strike hole and leaves a nice, clear black mark, that's easy to see.

Carl F. Thompson
Oregon

SIEVEKING AUTO KEY BLANK REFERENCE WINNER: **Trunk Release Energizer**

When a customer locks their keys in the trunk of their car and the car has an electric trunk release button in it, the easiest way — including impressing, etc. — to open that trunk short of having the key code, is to "hot-wire" the trunk release button.

This "hot-wire" tool can be easily made with a power plug that fits the car's cigarette lighter and a two-lead wire about four feet long. First pull the trunk release button out far enough to see the metal contacts on the back of the trunk release switch assembly. Plug the unit into the lighter and touch each lead to the contacts on the back of the trunk release switch. Many times the trunk will pop right open. Sometimes, you have to push the trunk release button to get the trunk to release.

I have also made a longer, two-wire, that will reach from the dome light to the glove compartment trunk switch for those vehicles where the lighter will not work unless the ignition is on.

And, I have one with really long leads with alligator clips on it that I can attach to the car's battery when I need a power source and cannot find it anywhere else on the vehicle.

You can obtain the parts you need to assemble your own trunk release from any Radio Shack.

David Ribble
E-Mail

[Editor's Note: This is another one of the "old hat" tips for those that know about it. However, there is a constant stream of "new" locksmiths coming into the business that may not have had the opportunity to find out about jumping the trunk release. For those that may not know about this trick, you can also "jump" from a "hot" fuse or, if your leads are long enough and the customer's battery is dead, from your own service vehicle. I even heard of one locksmith that purportedly carried a 12-volt battery just for this type opening. Regardless, thanks for the tip David.]

JAKE'S GRAB BAG PRIZE WINNERS: **Preventing Door Splintering**

Here's a trick to prevent the splintering on the opposite side of a wood door when drilling through from one side. Adhere a block of scrap wood to the back side of the door with heavy duty double stick tape at the proper location.

The tape and block of wood will allow for a very clean hole when the bit breaks through without the necessity of drilling from both sides.

I use this trick when installing deadlocks, night latches, door viewers and similar items. I buy my double-faced tape at a woodworking supply house. This tape applies easily and removes without residue.

Peter P. Schifferli
New York

Removing GM Squeeze Type Glove Box Locks

Here's a quick easy way to remove the plug from those squeeze type glove compartment locks for GM vehicles.

Remove the lock from the glove compartment door and at the back of the plug, gently pry one of the plastic retainer clips to the side with a small screwdriver, ice pick or whatever is at hand. Insert a curved shim. Now repeat for the other side and push the plug out of the cylinder.

Robbie Robinson
E-Mail

"C" Clip Removal

When trying to remove the "C" clip from the end of a cylinder plug, here are two easy ways to keep it from spinning around and around.


First file back the shoulders on an uncut key blank of the same keyway so that its tip will protrude from the end of the plug and prevent the clip from turning. I have one of these specially prepared blanks in all the major keyways.

The second way is to use a good thick pair of pinning tweezers and just push on both sides of the clip at once (Don't try this with cheap, light-duty tweezers!) with the end of the tweezers.

George Henderson
E-Mail

[Editor's Note: In addition to George's tip, you might try inserting a small-bladed screwdriver into the bottom portion of the exposed keyway at the end of the plug and if you have a Kwikset cylinder removal tool, you might try using the curved end against each side of the clip.]

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Post Mosler Syndrome

In this article, Dale discusses a recent confrontation with a MOSLER 11" round lug door money chest, and a few new details that will enlighten you about Mosler Protection.



by Dale Libby

Every once in a while, I meet a worthy opponent in a safe or money chest that introduces me to a few new problems that must be overcome. This is the fun part of safecracking. If you have ever worked on a safe or money chest that has taken over 14 hours to open, you will relate quite well to this story.

The victim of a massive assault was an over and under Mosler Money Chest and Safe which was commonly used in a large chain of supermarkets. The top of the unit was a large square door fire safe which the store kept the cash drawers from the registers. The store was a combination hardware and food store. The gang that raided the store had peeled and beaten the upper

safe into submission and finally pried the door open and removed the contents.

The lower part of the Mosler safe was an 11" round door money chest. What remained of the door is shown in Photograph 1, which is basically nothing. The dial, handle, dial ring, bearing plate and crane hinges were left in a broken pile beneath the safe. What we are looking at is a battered piece of round steel with a dial in the center.

This unit was going to be a real challenge. I quoted a price much to low as it turned out, to open this locked lug door. Before starting the attack, I wanted to see what I was against by examining the wreckage. Photograph 2, shows the parts that I salvaged from the top unit. The top lock was a Mosler 302-402 combination lock. This information is good to know because when the top lock is a 302-402, then the bottom lock is most likely an MR 302-402 click/ click lock.

The problem with the dial was that when it was turned on the bottom unit, there was no resistance, and no clickity click. Either it was not an MR 302-402, or the drive cam was broken. I did not realize the amount of hitting, punching, axing, and other damage that the gang did to this unit. They had tried to peel the back of the safe but eventually gave up. Time to open this Monster.

Attack Sequences:

At first, I thought I would move the safe out of its built-in closet and attack the unit from the back. This is a viable attack under specific circumstances. I had two major problems that stopped me from this attack.

First, the safe was built into a service center for the store. Everything was attached, including electric and data cables to and around the safe. It could be moved about 6 inches without damage, but more than that, the service center would have to be destroyed.

The second problem was discerned when I asked the customer what was behind the outer door. He stated that there was an inner door

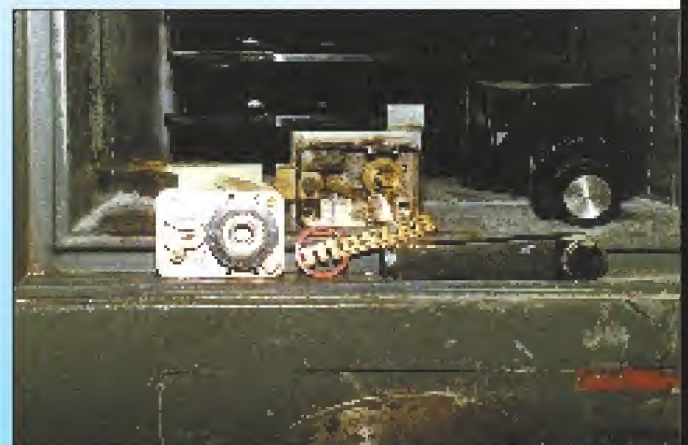


1. Smashed front of Mosler 11" round door money chest.

operated with two keys. I realized that the back attack was out of the question. If I did manage to get a hole in the back of the chest, it would accomplish nothing, for I would have to open the inner door. Even when it was opened, would not allow me to work on the outer round door, there would be no room.

I guessed that the safe in question incorporated a Mosler 302 lock mounted Vertical Down (VD), two active operating bolts at 3:00 and 9:00 o'clock, and a plate spring relocker, and a relock trigger in the lock. Had it been set off? I would soon find out.

First hole was drilled at about 67 and 1 inch out from dial center. The hardplate was decent but not totally incredible. The hole was right on and I had a view of the front side of the lever. I continued to drill the fence off the lever. A perfect penetration hole and placement. I turned the dial and tried to force the lever into the drive



2. Upper safe compartment with Mosler MR302 lock, dial and handle remnants.



cam, but it would not go. The MR drive cam was broken.

Finally, with enough playing, the lever dropped even with the top of the wheels but would NOT move up to withdraw the locking bolt of the combination lock. The back cover was still on the lock, so I opted to try a trick that usually works on the Mosler 302-402 locks.

In the past, I have been able to drill a small hole in the loose back cover, insert a wire with hook into the hole and pull the cover tight toward the outside of the safe. This will deactivate the relocking trigger in the lock so you can turn the dial and withdraw the bolt. The moment my sharp 3/16 inch drill bit touched the back cover of the lock, the cover dropped into the back of the safe.

I took my first break after a couple of hours work and re-evaluated my options. My first attack was perfect, but fruitless. I had wasted my time. If the gang had hit the spindle hard enough to break the drive cam and punch off the back cover, then there



3. Lock and bolt position lock is mounted VD with two bellcranks (not shown).

was no point in working with the lock and trying to either drill or depress the relock trigger in the lock. They had not only set off the internal relock trigger, but had obviously set off the relocking bar device located under the lock and transfer bolt mechanism.

Second attack would be for the bell cranks that transferred the vertical movement of the combination bolt to horizontal movement of the locking bolts. My other option would be to move the heavy safe and chest away from the service center and punch the

ends of the bolts in. Hindsight is perfect, unfortunately. I decided to drill from the front which gave me an education.

I pulled out my trusty McOmie books (corrected by me, of course) and made my measurements. I drilled off the bell cranks and the end to the bolts. I tried to move the bolts, but the plate relocker had fired blocking movement of the bolts to the inside of the door. Photograph 3, shows the inside of the door with the lock placed over the relock spring plate.

In photograph 3, my perfect hole in the lock lever can be seen, and the position of the combination lock in relation to the opening bolts and relockers. The bolt hooks are broken off and the bell cranks removed.

Now, I had two problems to overcome. At this time, I had invested five hours in what I thought was a simple opening. I had to overcome the relock spring and retract the bolts on both sides of the door. I made some indicating lines on the door, this let me see how much the door moved. It



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was not moving much.

Photograph 4, shows the relock spring plate that is held down by two extension levers attached to the back of the 302-402 cover. On the ends of these levers are plastic melt plugs. If the unit was to be torched, these plastic plugs would melt allowing the spring plate to activate. In this picture, you can see a hole in the spring that I drilled to pull it away from the bolt. This is on the right side of the bolt. This hole was perfect and it did work.

I was able to withdraw the bolt until it was in the unlocked position. One down, one to go. I started to drill the same hole on the other side of the door, the hinge side. I broke three drill bits before I realized I had hit hardplate 3/4 of an inch below the surface of the door. This was something new. By this time I was beat and faced a 1 hour drive back



4. Relock bar under lock. Note hole at one end (on right) used to hook relocker flat bar.

home for rest. I had seven hours in the opening so far and decided to come back the next day and finish the job. Also, I needed the help of a team member of Safebusters International, namely Tom Powers.

The next day, team member Tom Powers and I were at it again. The first thing Tom did was to go over my previous attack in detail, and he agreed that he would have done the same thing. He was surprised by the hardplate rod in the door over the right bolt. Photograph 5, shows the

edge of the door with the RELSOM roller bar partially pulled out of the side of the door. There is the 1/2 inch roller Relsom bar, next is the ball bearing (also very hard) detent mechanism, and then the opening bolt. This bolt fits into a cut out in the side of the door and keeps the lug door from turning.

Usually, these doors turn to the right (clockwise) to open, but this is determined by the crane hinge mechanism and detent. With the hinge destroyed and the crane missing, then the door can turn either direction to open. Photograph 6, shows the roller Relsom bolt with several holes in it. The edge of the door was ground away before I could remove this Relsom bolt.

The roller bar proved to be the demise of more drill bits that I'd like to admit. It did the job of NOT letting

Continued on page 88



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Continued from page 86



5. Edge view of hinge side of round door showing locking bolt, bolt detent and hidden Relsom rod.



6. Relsom rod removed showing penetration holes. Rod is free spinning in safe door.

us get to the other side of the relock plate. Once drilling on this bar, it would move and break off the tip and stop progress until the end of the drill was removed.

We decided to then move out the whole unit from the service center and drill in from the right side of the safe to punch in the bolt. The measurement in the McOmie book was 3-1/8 inch. Measuring from the front of the safe, this seemed reasonable, but the correct measurement was 2-7/8 inch. After drilling through several inches of

cement and rock, we penetrated the safe compartment behind the bolt. After trying to use this hole, we decided to drill another hole 3/4 inch toward the front of the safe. Eventually we made the penetration again, many drill bits later, and punched the remaining bolt in. The door opened, 12 hours later. Now the post Mosler syndrome set in.

The owner was impressed with the work that Tom and I did, and he voluntarily doubled the originally asked price. Now, I will never quote a single price for opening a burglarized

safe or chest. It will be simply time, materials, labor, an hourly rate, and an aggravation factor (nominal). I have this printed on my invoices.

It took me several days to physically and mentally recover from this post Mosler Syndrome opening. As time goes on, the pain, sweat, and tears will be forgotten, until the next time you are asked to OPEN & PROSPER!!!!

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Reed Report

Q. What is an AK-U-TEMP?

A. This is a tool to measure doors for installation of deadbolts and knob locks. Instead of having to use a ruler, square, and those flimsy templates, you can use this tool and it will take care of all you need to do to the job. It's also made of aluminum so it should last a long time.

Q. I paid quite a bit for my Double Re-Key Tool, which was supposed to work on all knob locks. Maybe I am doing something wrong. Can you help?

A. The first thing you are doing wrong is thinking it will work on all knob locks. Because this tool drills the bottom of the plug, it will only work on locks where the plug can be rotated 180 degrees. This will eliminate many of the knob locks. Other than that, I have heard only good things about the tool. Now that you know what it will not work on, maybe you will enjoy using it more.

Q. In the past I have had absolutely no trouble picking the Club locking bar. Lately it seems to be a different story. What changes have they made to cause me problems?

A. None to my knowledge. If any readers out there have experienced the problem just let me know and we will look into it. You may want to try the UNLOCKER pick. This tool was designed especially for the Club. It has a double-ball pick down the center. It fits right over the lock and picks it easily. By the way, you mentioned what changes have been made to the Club. They do have a double-sided lock as opposed to the older single sided, however, I really don't see why this should be causing you any greater problems. The UNLOCKER will work very well on the older type as well as the new type.



Yours For Better Security,

Bill Reed
Bill Reed

Scatter Shooting while wondering whatever happened to . . . Vince Spadafora

I get probably more questions about products than anything else. However, if you don't get an immediate answer from me, it's because I don't know the answer. To get the answer I don't go to the manufacturer. I go to locksmiths who have used the product. If I can't find one, then I go to the manufacturer, have them send me the product, then take it to a locksmith for evaluation after I check it out. I may seek as many as three opinions before reporting the results. So, hang in there. I WILL get back to you. Also, while I am jabbering, I am starting to get many requests for seminars in 1997. I am NOT going to start booking until September 1st. We will be making quite a few changes next year, including many more hands-on seminars. In addition, we will also be putting on our own mini-conventions across the country. Until we get these changes in place, we won't be able to start booking association seminars. In the meantime, we still have some more seminars coming your way this year, so watch for us. **NL**

If you'd like to attend a Bill Reed seminar, choose from the following. For more info, contact Bill directly at (904) 476-2799.

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| Oct. 29-31 | San Diego, CA | Nov. 9 | Honolulu, HI |



KEY CODES

Yamaha Motorcycle A7001-A8500

Specifications

Starting Cut: .158
Spacing: .098
Depth Increment: .0197

HPC 1200

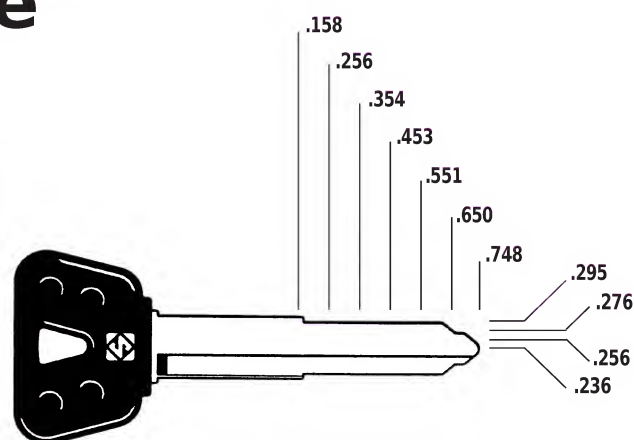
Code Card -
Cutter -
Stop -

Framon

Cut Start - .158
Cut to Cut - .098
Spacing Block - #5

Spacing and Depths using Universal Micrometer Card #58.

| | Spacing | Depths |
|---|---------|--------|
| 1 | .158 | .295 |
| 2 | .256 | .276 |
| 3 | .354 | .256 |
| 4 | .453 | .236 |
| 5 | .551 | |
| 6 | .650 | |
| 7 | .748 | |



Key
Profile

Key Blanks

Original - 90890-55963-00
Silca - YH35RBP

NOTES: This Yamaha code series
is found on the GTS1000, YZF750,
XJ 600 and Royal Star models.

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| A7004 | 4331241 | A7037 | 2142121 | A7070 | 3434223 | A7103 | 3213142 | A7136 | 1242233 | A7169 | 3241211 | A7202 | 3221311 |
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| A7033 | 4242324 | A7066 | 2142413 | A7099 | 3432113 | A7132 | 4211421 | A7165 | 4324331 | A7198 | 2443211 | A7231 | 4213231 |



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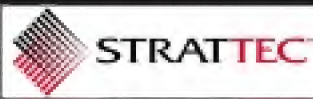
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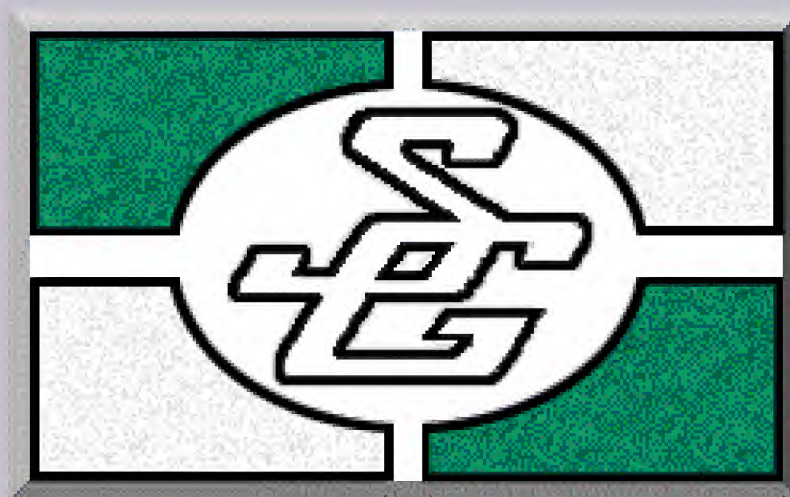
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| A8345 2211231 | A8370 4123421 | A8395 2243132 | A8420 2343311 | A8445 4431422 | A8470 4411212 | A8495 4243341 |
| A8346 1241234 | A8371 4343421 | A8396 3221234 | A8421 3313442 | A8446 2321314 | A8471 3424412 | A8496 1342412 |
| A8347 1242134 | A8372 2342114 | A8397 3242334 | A8422 3322411 | A8447 3213322 | A8472 2312134 | A8497 3112234 |
| A8348 1332434 | A8373 2141234 | A8398 2131334 | A8423 3131324 | A8448 3431441 | A8473 3132314 | A8498 3421433 |
| A8349 1341134 | A8374 4412131 | A8399 3141224 | A8424 1243224 | A8449 4342332 | A8474 2241134 | A8499 3114314 |
| A8350 3434342 | A8375 1223423 | A8400 3432234 | A8425 2342334 | A8450 2113441 | A8475 3232214 | A8500 1223234 |
| A8351 3431432 | A8376 2142143 | A8401 2311324 | A8426 3224334 | A8451 3132311 | A8476 2143314 | |

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TEST DRIVE



Taking Industry Products for a Spin Around the Block

STOR-A-KEY PUSH BUTTON PRO SERIES BY SUPRA

SUPRA has been manufacturing a variety of key storage boxes for a long time now. The most recent addition to the SUPRA product line is the STOR-A-KEY push button key storage lock boxes.

SUPRA key storage boxes are widely used throughout the real estate industry to store keys on the exterior of a property (usually hung from the knoblock) so that an agent can gain access when desired. The use of key storage boxes has since rapidly expanded to homeowners who want to provide children access to a house key without the fear of it being lost or stolen. Business are also using key storage boxes for service vendors, eliminating the need for an operator to be present to provide a key.

PRODUCT DESCRIPTION:

A push-button line of key storage lock boxes designed to limit the availability of keys to assigned users. The unit is designed to be hung on a knoblock by a shackle preventing its removal without releasing the shackle.

CONSTRUCTION & DESIGN:

The STOR-A-KEY is constructed of a sturdy cast metal with a removable lid. The 10 button push-button combination can be easily changed to a combination of your choice as often as you like. The interior of the key box is relatively small, but it will store a number of keys. The shackle and body is covered with a scratch protective cover. The STOR-A-KEY is available in a wall mount model (using four screws) or a portable hanging model like the ones shown here. The



DESCRIPTION:

STOR-A-KEY by SUPRA Products, Inc. A push button key storage lock box.

PRICE: \$34.95

COMMENTS:

The new push-button design and easy combination changing capabilities greatly enhance this device.

TEST DRIVE RESULTS:

A great product that can fit a variety of applications for businesses and homeowners.

STOR-A-KEY is rustproof, durable and warranted against defects in materials and workmanship for 1 year.

OPERATION:

The new STOR-A-KEY push-button lock is much more user friendly than the combination dial lock boxes we are most familiar with. Access time is greatly reduced with the push-button lock and anyone can quickly learn how to operate it, even small children. Enter the combination of your choice, push down on the open latch and the door drops open. A shackle release in the interior allows easy installation or removal of the unit.

COMMENTS:

This is a great product. The new push-button design is a vast improvement over the dial combination. The combination changing is also much more simplified over its dial combination brother. It is well constructed, can fit a variety of applications for businesses to homeowners and is reasonably priced. Suggested retail price for the STOR-A-KEY is \$34.95.

For more information on the STOR-A-KEY, or on a number of other SUPRA products call: (800) 225-2974. **TNL**